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Discussion: Place of blood, plasma and plasma "extenders" in treatment of severely burned patients.

BLOOD, PLASMA & PLASMA "EXTENDERS" in SEVERE BURNS

Plasma and Blood

Prompt use of plasma and whole blood for restoring blood volume has saved the lives of countless people with severe or extensive burns. Plasma provides protein for tissue regeneration and many materials necessary for sustaining physiologic and metabolic functions. In addition to those elements, whole blood furnishes red cells to increase the oxygen-carrying capacity of the blood. In severe burns, large quantities of plasma are lost, but ordinarily not many red cells escape. Consequently whole blood is not generally used as often as plasma in burn treatment—especially during the early, emergency stage when there is great hemoconcentration.

Plasma "Extenders"

There is a natural tendency to become preoccupied with the purely physical considerations involved in restoring the fluid volume and thus to exclude—or to give less regard than is due to—vitally important biological considerations. The main objective in the search for plasma "extenders" has been to find colloidal materials that could imitate the natural blood colloids in maintaining the circulatory volume. Such materials might serve as temporary expedients in the emergency treatment of shock. But it is recognized that plasma "extenders" cannot be regarded as equivalent substitutes for plasma; rather, they would be intended only for emergency use—if the demand for genuine plasma should suddenly exceed the supply—and if the extenders prove to be satisfactory and safe.

Lyovac Normal Human Plasma, Irradiated

Lyophilized plasma is *stable* and *portable*; always ready for emergency use at *five minutes' notice*—whenever blood fluids must be immediately restored—even in extremely unfavorable circumstances.

LYOVAC® Normal Human Plasma (Irradiated) is prepared from fresh, citrated, human blood of carefully selected donors, according to the requirements of the National Institutes of Health. The plasma is pooled, irradiated to reduce the risk of homologous serum hepatitis, rapidly frozen, *dehydrated from the frozen state under high vacuum* (the lyophile process), and sealed under vacuum.

LYOVAC Normal Human Plasma (Irradiated) is supplied desiccated in vacuum bottles to yield 50 cc., 250 cc., and 500 cc. of irradiated normal human plasma (containing approximately 660 mg. of *gamma globulin* in each 100 cc.), or smaller quantities of *hypertonic plasma* (with proportionately higher *gamma globulin* content).

Suggested Dosage of Plasma for Burned Patients

100 cc. of plasma for each per cent of body surface burned (to all patients with 10 per cent or more of skin area burned). Half the dose should be given in the first 4-6 hours, and the remainder in the next 12 hours. Lyovac Normal Human Plasma (Irradiated) is administered at the rate of 40 to 60 drops per minute. In emergencies, this rate may be increased without reaction.

Sharp & Dohme, Philadelphia 1, Pennsylvania

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The Surgical Treatment of Acquired Heart Disease

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SUMMARY

Success in the surgical treatment of certain forms of congenital cardiac malformation has led to a renewed interest in the treatment of acquired heart disease. Similarly, technical advances and a better understanding of cardiac physiology under operative conditions have enabled surgeons to broaden the field and improve the possibilities of cardiac operations.

ACQUIRED heart disease is generally controlled by proper medical management, and in many instances cure can be achieved. There are, however, cardiac conditions, both acute and chronic, which cannot be alleviated by conservative means, and surgical therapy then is indicated.

In cases of cardiac wounds, prompt decision and surgical action to control hemorrhage or relieve tamponade may be necessary. An arteriovenous fistula or aneurysm can increase the work of the heart to the point of causing failure. Contraction of the pericardium by scarring resulting from chronic pericarditis may occasion serious or even fatal interference with the circulation. Valvular disease, long the great challenge in cardiac surgery, is being brought into the operative sphere. It seems reasonable to assume that as the ambit of effective cardiac operation is widened, surgical treatment will give aid in other forms of acquired heart disease for which there is no specific conservative therapy.

INJURY TO THE HEART

Although severe wounds to the heart and adjacent great vessels usually result in death, there are possibilities for applying procedures which may be life-saving. In some cases conservative treatment may be effective. Severe contusion to the heart, when not complicated by pericardial effusion, may be treated by methods used for coronary occlusion.² Pericardial aspiration may be used in treating penetrating wounds which cause tamponade^{3, 4, 11, 30, 32}—silent heart, increased diameter of the cardiac roentgenologic shadow, increased venous pressure, and decreased arterial pressure. But if there is no clinical improvement despite such measures and the cardiac wound continues to bleed, thoracotomy is indicated. The approach is through the left fourth interspace, with division of the fourth and fifth costal cartilages. When the pericardium is opened, suction is applied to remove the blood while search is made for the wound. Moderate pressure with the index finger will usually control the bleeding while the wound is closed with interrupted silk. A heavy silk suture passed through the apex of the heart may aid in steadying or displacing the heart so that suturing can be done more easily, but it must be remembered that such displacement can cause pronounced circulatory depression.

Metallic foreign bodies within the heart or embedded in the cardiac muscle are usually removed since they frequently cause symptoms.¹⁻¹⁸ They may also be in a position to cause erosion of a great vessel or of the heart wall itself, with consequent sudden fatal hemorrhage. Removal of small foreign bodies which are not adjacent to vital structures usually is not necessary. At times a foreign body that does not in itself cause symptoms may, in passing into the heart, have produced a lesion so disturbing to the function of the organ that the patient

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eventually dies. For example, a Marine who recovered from massive hemothorax caused by a gunshot wound of the heart. A month later he had symptoms typical of heart failure. In addition, to the left of the sternum there was a loud continuous "machinery murmur," much like that associated with a large patent ductus, low diastolic pressure and wide disparity between the systolic and diastolic pressure. In spite of all conservative measures and an operation which only demonstrated that surgical aid was not possible, the patient died. At postmortem examination it was observed that the bullet had entered the left atrium and passed into the subaortic portion of the left ventricle, causing a left atriosubortic fistula and also causing aortic insufficiency from a tear in one aortic cusp. Death was the result of cardiac failure caused by the fistula and the valvular insufficiency.

TUMORS OF THE HEART AND PERICARDIUM

There have been over four hundred cases of primary tumor of the heart and pericardium recorded in the literature.^{12, 17, 21, 33} In approximately one hundred of the cases the lesion was primary malignant tumor of the heart, and in most instances the site of origin was the right atrium. Neoplasms originated in the pericardium in fewer than a hundred cases.

Opportunities for surgical removal of cardiac and pericardial tumors have been rare because of the inability to establish the diagnosis before operation was out of the question. The more frequent use of angiocardiology, in conjunction with other diagnostic refinements, may help toward earlier and more precise diagnosis in the future. Meanwhile, safer methods of operating upon the myocardium are being studied in the laboratory.

ARTERIOVENOUS FISTULA

Abnormal communications between arteries and veins may cause cardiac enlargement due to dilation and hypertrophy. This effect upon the heart has been found to be caused by the increase in work required of it to propel the larger blood volume resulting from the fistula; it may lead to myocardial and valvular damage and to cardiac failure.^{24, 26} These physiological responses to the fistula are dependent upon the size of the communication and its location in the vascular system; generally speaking, the larger the fistula the greater the effect upon the heart. Although these circulatory disturbances are commonly associated with acquired fistulae, they may occur in the congenital forms if the communications are large or numerous.¹³⁻²⁹

The diagnosis of an arteriovenous fistula can be made by the presence of a continuous "machinery murmur" heard best over the communication and along the veins leaving the fistula. A palpable thrill is likewise typical, and both of these characteristic phenomena can be abated by digital occlusion of the opening.

Obliteration of the fistula is followed by gradual restoration of the cardiac status to normal. As the

sudden closure of a very large fistula may overburden an embarrassed heart, intravenous infusion of fluids and blood during operation should be used sparingly unless there has been considerable loss of blood.

CORONARY ARTERY DISEASE

The indirect approach to the treatment of coronary artery disease by cervical or thoracic sympathectomy has not been accepted generally as a satisfactory method of increasing the supply of blood to the myocardium, but it has some effect on controlling pain. A vast experimental effort has been directed toward the development of a method of producing an extracardiac collateral blood supply to the heart, but as yet no procedure has been universally adopted by surgeons who are working in this field. Experimental evidence has been presented which demonstrates the feasibility of utilizing a vein graft from the aorta to the coronary sinus in order to revascularize the heart, and this method, although difficult, is being used in treating a limited number of patients at present.²⁷ Similarly, there is the suggestion that a systemic artery, such as the internal mammary artery, be implanted into the myocardium so that anastomotic channels might form between it and the coronary arteries.^{14, 34} Experiments with this method have demonstrated that this does occur to a certain extent, but fibrosis is likely to occlude the new vessels subsequently.

CONSTRUCTIVE PERICARDITIS

The diagnosis of chronic constrictive pericarditis can usually be made without difficulty. The heart sounds are quiet, the pulse pressure diminished, the venous pressure increased, and the kymographic studies of the cardiac border show little excursion. Although the heart size, as measured in a roentgenogram, is frequently smaller than normal due to the contraction of the pericardium, it may be larger due to the presence of pericardial fluid and the thickness of the pericardium. In the more chronic forms, calcification in the pericardium can be visualized. There is pronounced reduction in exercise tolerance, and when cardiac filling and function is severely disturbed by the scar formation, there is enlargement of the liver, and ascites. Not infrequently a diagnosis of cirrhosis of the liver is made erroneously.

The surgical treatment of constrictive pericarditis is well established.²⁸ It consists in the removal of the pericardium first from the left ventricle, then as much as is necessary from the right ventricle and anterior surface of the heart to free all constriction. This usually requires the denuding of the entire anterior surface from beyond the left phrenic nerve, the apex, the auriculoventricular groove, and the right atrium and ventricle, including the cavae. The use of the median sternotomy incision to gain proper exposure is recommended.²²

It is held that excision of the pericardium for tuberculous pericarditis should be done only after the disease has become quiescent. However, success-

ful surgical treatment in a number of cases in which the disease was in an early stage has led to the suggestion that pericardectomy be employed in the presence of active disease in patients who are losing ground. Four such cases have been reported by Holman.²³ A cure resulted in three cases, and improvement in one. Large doses of antibiotics were used pre- and postoperatively.

CONSTRUCTIVE VALVULAR DISEASE

The operative treatment of mitral stenosis resulting from rheumatic fever has been one of the most challenging problems in cardiac surgery. Although in many cases the patient can be maintained on a medical regimen and enjoy a comparatively normal existence, in many others progressive narrowing of the mitral valve causes pronounced physical disability and early death.

The suggestion of Brunton⁵ in 1902 that the stenotic valve might be treated by surgical incision led to a number of such attempts. The approaches used included the left ventricle, left auricular appendage, and the pulmonary veins. Many of these pioneer efforts resulted in death due to mitral insufficiency which occurred when a portion of the stenotic valve was removed or torn.

It is now felt that with the methods currently being used a more selective kind of valvulotomy can be performed by incising or fracturing the sealed commissures. The approach is through the left auricular appendage which is opened above an occluding clamp after a purse-string suture has been placed around the base. The index finger is inserted through the opening, as the clamp is removed, and bleeding is thereafter controlled by slight tension on the purse-string suture. The tip of the index finger, in the atrium, can then be used to gauge the degree of stenosis, and, at times, the amount of regurgitation. When "finger fracture" of the valve is used, it is accomplished by pushing the finger through into the left ventricle with the resulting tear usually occurring at the commissures. A commissurotomy by cutting with a special knife, which is guided to the proper position along the index finger, may be necessary if the valve is very rigid. Cutting the anterolateral commissure is the procedure of choice when incision is required, but incision of the medial commissure also may be necessary. The occluding clamp is reapplied, and the opening is closed with continuous silk. Tying the purse-string suture may be substituted for reapplying the occluding clamp, but if this is done the incision into the auricle should be sutured to prevent subsequent hemorrhage should the purse-string suture loosen.

Although knife commissurotomy would appear to offer certain advantages in the accuracy of placing the incision, it has been found that the simpler technique of finger fracture alone suffices in most instances.

The mortality rate for these procedures varies directly with the degree of morbidity present in

patients selected for operation. In the most favorable cases, a mortality rate of 5 to 10 per cent can be expected. If the least favorable patients are selected, much higher fatality rates will result, but those who survive may have greater benefit.

Favorable candidates for operation are those who have moderate to severe disability from mitral stenosis with little or no regurgitation, frequent episodes of congestive pulmonary symptoms, and high pulmonary artery pressure (observed in catheterization studies) plus reduced cardiac output without appreciable increase upon exercise. Contraindications to operation are: Associated valvular lesion, active rheumatic disease, uncontrollable failure, left ventricular enlargement, and severe mitral insufficiency.

As the field of cardiac surgery develops it is important to collect preoperative and postoperative physiological data so that an accurate appraisal of the benefit of operation can be obtained. Only in this way will it be possible to determine how frequently and well the procedure has corrected the mechanical problem, and how permanent the benefit is. Close collaboration between cardiologist and surgeon is an essential aspect of this work.

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Western Equine and St. Louis Encephalitis in Man, California, 1945-1950

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SUMMARY

A large group of etiologic agents, some known and some unknown, produce in man a clinical syndrome now labeled "infectious encephalitis."

The separation, from this larger group, of single disease entities which cause similar clinical symptoms is possible, but calls for diagnostic acumen plus supporting laboratory evidence. Two etiologically specific entities, western equine encephalitis and St. Louis encephalitis, are frequently encountered in rather well-defined areas of California, the Central Valley and Imperial Valley; and there is a definite seasonal pattern of occurrence—June through October. There are certain guides that are helpful in differential diagnosis. Establishing a diagnosis on the basis of clinical evidence is difficult. Laboratory studies are of great importance not only for diagnosis in the individual case but for advancement of etiology. Specimens are worthless unless taken at proper intervals and submitted by methods described.

It is probable that encephalitides caused by still unknown agents exist in California. The isolation and identification of new encephalitogenic viral agents will depend in large measure upon the submission by physicians of suitable specimens from patients with central nervous system disease in which the cause is obscure.

THE term infectious encephalitis is a broad clinical one which refers to an inflammation of the brain produced by a living agent.

In public health morbidity reporting, "infectious encephalitis" is commonly used in a more restricted sense, and theoretically includes only the so-called arthropod-borne viral encephalitides occurring in this country—eastern and western equine encephalomyelitis and St. Louis encephalitis, and von Economo's disease.* In practice, however, physicians commonly report in this category, in addition to the above diseases, not only those encephalitides pre-

sumed to be infectious in origin, and for which the etiologic agent has not yet been defined, but also those encephalopathic conditions secondary to infectious processes of known cause, such as mumps, measles, varicella, and influenza. The present report is concerned primarily with "infectious encephalitis" caused by one or the other of two viral agents, namely, the viruses of western equine encephalomyelitis and of St. Louis encephalitis.

Infection of man with western equine encephalomyelitis virus was first recognized in 1938 in California;^{6,7} prior to that time the virus was considered to produce a disease only in horses, since the virus was first isolated from this species,⁹ in which it had produced extensive epizootic disease.

Human infection with the St. Louis virus was first recognized in St. Louis, Mo., in 1933.¹⁰ In California, serologic evidence of human infection was reported in 1939 by Howitt,⁷ and the virus was isolated for the first time in this area from a fatal human case in 1945 by Lennette.⁸ In the years following the recognition that these agents could cause infection of man, human illness attributable to these viruses has been found to be relatively common.

The purpose of the present communication is to summarize certain observations concerning epidemiologic and clinical aspects of encephalitis caused by these two specific agents.

EPIDEMIOLOGIC CHARACTERISTICS OF WESTERN EQUINE ENCEPHALOMYELITIS AND ST. LOUIS ENCEPHALITIS IN CALIFORNIA

Prevalence. During the six-year period from 1945 through 1950, a total of 1,251 cases of encephalitis was reported to the State Department of Public Health (Table 1). Of this total, 154 cases were classified as "other encephalitides," i.e., they were postinfectious or postvaccinal types. There remained, therefore, a residue of 1,097 cases which were thus allocated to the "infectious encephalitis" category, which by definition, as pointed out above, should include only the arthropod-borne viral encephalitides and von Economo's disease, but in actual practice includes a diverse group of encephalopathic conditions of unknown cause.

There was wide variation from year to year in the number of cases of "infectious encephalitis" reported. The incidence was highest in 1945 and 1950, when 302 and 357 cases, respectively, were reported. The lowest number of cases reported was 71, in 1948.

Of the 1,097 cases in the "infectious encephalitis" grouping, 309 (28 per cent) were determined by

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From the Viral and Rickettsial Disease Laboratory and the Bureau of Acute Communicable Diseases, California State Department of Public Health, Berkeley.

* This is in conformity with the classification established by the American Public Health Association.¹

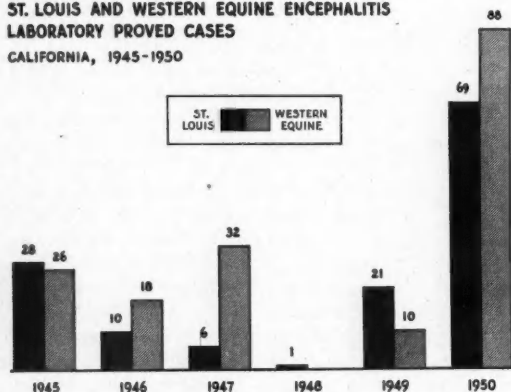
TABLE 1.—Distribution, by Year, of 1251 Reported Cases of Encephalitis, California, 1945-1950.

Year	Total Cases All Encephalitides	Total Cases Recorded as "Infectious Encephalitis"*	Laboratory-Confirmed Cases of Western Equine and St. Louis Encephalitis			Total Cases Recorded as "Other Encephalitides"†
			Total	W.E.E.	St. Louis Enceph.	
1945	311	302	54	26	28	9
1946	177	160	28	18	10	17
1947	141	127	38	32	6	14
1948	75	71	1	0	1	4
1949	128	80	31	10	21	48
1950	419	357	157	88	69	62
Total	1,251	1,097	309	174	135	154

* See text for definition.

† This category includes encephalitis following infection with such agents as the viruses of rubeola, varicella, mumps, herpes, influenza, etc., and the postvaccinal encephalopathies.

Chart 1.—Distribution, by year, of laboratory-confirmed cases of western equine and St. Louis encephalitis, California, 1945-1950.

ST. LOUIS AND WESTERN EQUINE ENCEPHALITIS
LABORATORY PROVED CASES
CALIFORNIA, 1945-1950

laboratory methods to be caused by the western equine or St. Louis viruses (see Table 1 and Chart 1). Laboratory studies were not done in all instances, and it would appear probable that had blood specimens been available for examination in more of these reported cases, these viruses might have been found to be the infecting agents in additional instances. For example, in 1950, a total of 357 cases of "infectious encephalitis" was reported. Serologic tests were done on blood specimens available from 272 of these patients and 157 (58 per cent) of them had serologic evidence of current clinical infection with the St. Louis or western equine viruses. In addition, the fact that the blood of the remaining 115 patients was negative for these viruses* indicates that an appreciable proportion of patients (42 per cent of 272 tested) who were classified as having "infectious encephalitis" actually had a clinical condition caused by some other agent and suggests the possible existence of other neurotropic viruses as yet unrecognized.

Geographic distribution. Figure 1 gives the geographic distribution, by county, of 1,078 reported

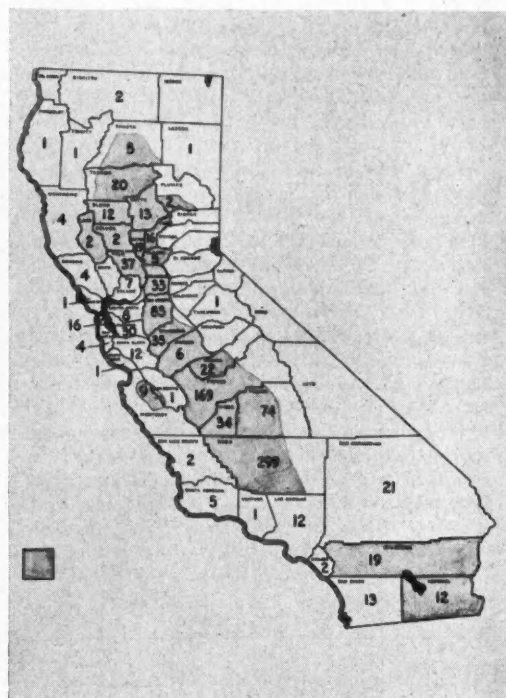


Figure 1.—Geographic distribution, by county, of 1,078 reported cases of "infectious encephalitis," California, 1945-1950. (Shaded areas indicate counties in which laboratory-confirmed cases of western equine or St. Louis encephalitis occurred.)

cases of "infectious encephalitis" during the period 1945-1950.* The cases have been allocated by county in which infection presumably occurred. It will be noted that cases were reported from 46 of the 58 counties in California. The preponderance, however, was reported from the Central Valley areas, with the largest number in Kern, Fresno, San Joaquin, and Tulare counties.

* Either specific antibodies did not develop or there was no rise in antibody titer during the course of the illness.

* Table 1 gives data on a total of 1,097 cases of "infectious encephalitis" reported. Figure 1, however, covers only 1,078 cases, since 19 were in transient workers and hence could not be allocated to any specific county.

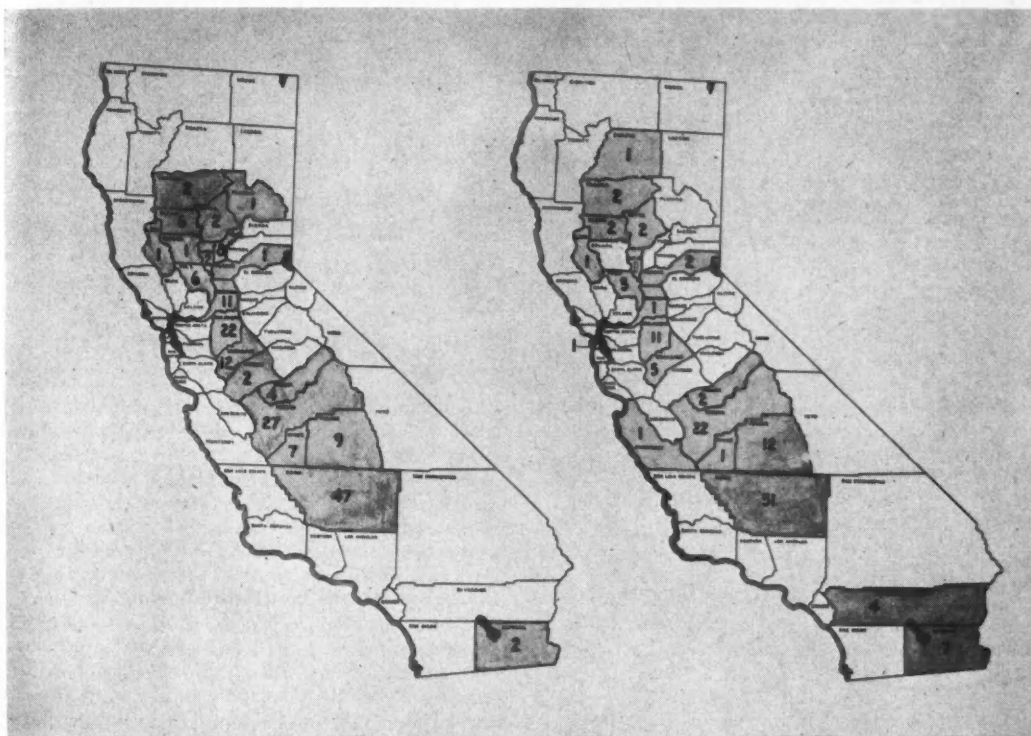


Figure 2.—Distribution, by county, of 173 cases of western equine encephalitis (left map) and 132 cases of St. Louis encephalitis (right map), California, 1945-1950. (Does not include one case of western equine and three of St. Louis encephalitis which could not be allocated by county.)

In a comparison of Figure 1 with Figure 2 it will be noted that laboratory-proved cases of western equine and St. Louis encephalitis, which are included in the "infectious encephalitis" category, appear by and large to be confined to the Central and Imperial valleys. These proved cases of western equine and St. Louis encephalitis have been reported from only 23 counties of the state (Figure 1).

The geographic distribution within the state is limited, essentially, to the hot, irrigated agricultural sections of the Central and Imperial valleys, and in all probability reflects the distribution of the known mosquito vectors.

Seasonal distribution. The restriction of the occurrence of cases of these two encephalitides to a definite season is rather striking, as can be seen from Table 2 and Chart 2. On the other hand, it will be noted that cases of "encephalitis" (without regard to infecting agent) occur in every month of the year; and, if the category is narrowed to include only reported cases of "infectious encephalitis," this year-round pattern still obtains. The occurrence of a pronounced increase in the number of cases reported during the months of June through October, with the highest incidence during July, August and September, is also brought out in Table 2 and Chart 2. If consideration of seasonal occur-

rence is confined to laboratory-confirmed cases of St. Louis and western equine encephalitis, the limited period of incidence is particularly evident; laboratory-confirmed cases occurred only during

TABLE 2.—Distribution, by Month of Onset, of 1251 Reported Cases of Encephalitis, California, 1945-1950.

Mo. of Onset	Total Cases, All Encephalitides	Total Cases Recorded as "Infectious Encephalitis"	Total Cases Recorded as "Other Encephalitides"	Laboratory-Confirmed Cases of West Equine and St. Louis Encephalitis
Jan.	43	31	12	....
Feb.	32	24	8	....
March	34	22	12	....
April	33	24	9	....
May	39	29	10	....
June	71	48	23	9
July	241	219	22	78
August	315	299	16	107
Sept.	249	241	8	94
Oct.	82	75	7	21
Nov.	43	34	9	....
Dec.	33	26	7	....
Not stated	36	25	11	....
Total	1,251	1,097	154	309

* See Table 1.

Chart 2.—Seasonal distribution of encephalitis in California, 1945-1950.

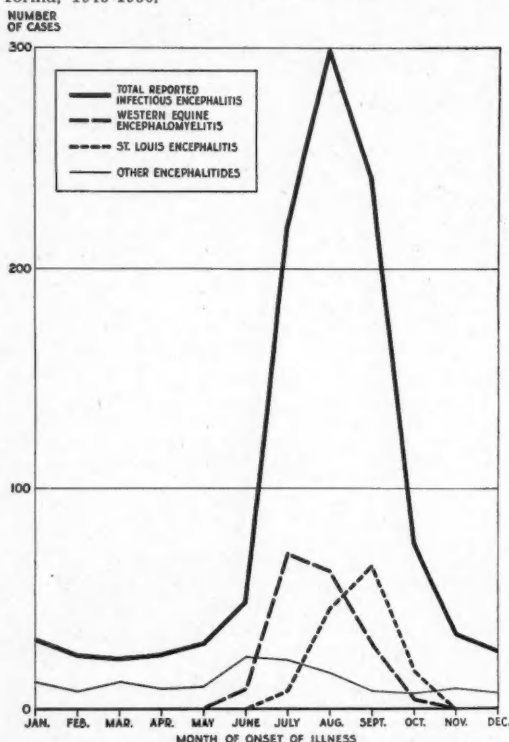


TABLE 3.—Distribution, by Month of Onset, of 309 Laboratory-Confirmed Cases of Western Equine and St. Louis Encephalitis, California, 1945-1950

	Western Equine No.	Per Cent	St. Louis No.	Per Cent
Jan. to May.....	-----	-----	-----	-----
June	9	5.2	-----	-----
July	70	40.2	8	5.9
August	62	35.6	45	33.3
Sept.	29	16.7	65	48.2
Oct.	4	2.3	17	12.6
Nov.-Dec.	-----	-----	-----	-----
Total.....	174	100.0	135	100.0

the months of June through October. This seasonal distribution suggests that cases which are diagnosed as "infectious encephalitis" during the period November through May are not caused by the western equine or the St. Louis viruses, but are attributable to some other causal agent or agents. The seasonal distribution also coincides with the seasonal variations in the numbers of the arthropod vectors.

The difference in seasonal incidence of western equine encephalitis when compared with that of St. Louis encephalitis is also of interest. Two rather distinct waves are apparent. Chart 2 and Table 3 illustrate this point. Western equine encephalitis, in

TABLE 4.—Distribution, by Age of Patient, of 309 Laboratory-Confirmed Cases of Western Equine and St. Louis Encephalitis, California, 1945-1950.

Age	Western Equine No.	Per Cent	St. Louis No.	Per Cent
Under 1 year.....	35	20.1	2	1.5
1- 4	26	14.9	20	14.8
5- 9	16	9.2	16	11.8
10-19	24	13.8	25	18.5
20-29	10	5.7	24	17.8
30-39	13	7.5	19	14.1
40-49	17	9.8	11	8.2
50 and over.....	33	19.0	18	13.3
Total by type.....	174	100.0	135	100.0

general, usually appears a month earlier than St. Louis encephalitis, and reaches its peak in July, with 80 per cent of the cases occurring by the end of August. St. Louis encephalitis, in contrast, appears somewhat later, and usually reaches its peak in September, with 60 per cent of cases occurring during September and October. This temporal difference in incidence suggests that the viral agents may be transmitted by different vectors.

Some of the factors involved in the determination of the geographic and seasonal distribution have been established by the work of Hammon and Reeves and their associates^{3, 4, 5} in the Kern County area. These investigators reported certain mosquitoes (for example, *Culex tarsalis*) are the vectors mainly responsible for the transmission of western equine and St. Louis encephalitis in California, and they suggested that the probable natural infection cycle is bird-mosquito-bird; infection in the horse and man is accidental and is extraneous to the basic cycle necessary to maintain the agent in nature. The seasonal distribution observed agrees with the known biologic requirements of the reported vectors.

Age and sex distribution. As to the age distribution of patients in the laboratory-confirmed cases, there is a striking difference between St. Louis encephalitis and western equine encephalitis. It will be noted in Table 4 that in a six-year period only two cases (1.5 per cent) of St. Louis encephalitis occurred in persons under one year of age, whereas 35 (20.1 per cent) of the patients with western equine encephalitis cases were in this age group. The reason for this difference is not yet clear. One explanation might be that since inapparent or sub-clinical infection with the St. Louis virus is more widespread than is similar infection with the western equine virus,¹¹ more persons are immune to the former than to the latter equine virus. Consequently, more newborn children might have immunity (by reason of passive transfer of antibody from the mother) to one agent than to the other.

The relative incidence of St. Louis and western equine encephalitis in infants is reversed in the 20-29 and 30-39 year age groups. Of the proved cases of St. Louis encephalitis, 17.8 per cent occurred in the 20-29 age group and 14.1 per cent in the 30-39

TABLE 5.—Distribution, by Sex of Patient, of 309 Laboratory-Confirmed Cases of Western Equine and St. Louis Encephalitis, California, 1945-1950.

Sex	Western Equine		St. Louis	
	No.	Per Cent	No.	Per Cent
Male	121	69.5	85	63.0
Female	53	30.5	50	37.0
Total.....	174	100.0	135	100.0

group; comparable figures for western equine encephalitis are 5.7 per cent and 7.5 per cent respectively.

With the exceptions mentioned, the occurrence of both diseases was fairly evenly distributed over the various age groups.

In the laboratory-confirmed cases there were about twice as many male patients as female (Table 5). This perhaps reflects a difference in opportunity of exposure, which, in turn, is dependent upon occupation. Such an explanation is not fully satisfactory, however, since the difference in incidence as between sexes is equally evident in the childhood group, in which differences in opportunity for exposure are not so clearly related to occupation.

Rural and urban distribution. Risk of infection with the two viruses under consideration appears to be greater under rural than under urban living conditions. Thus, in 1950, of the 157 laboratory-proved cases of encephalitis, 113 were in residents of rural areas, and the remaining 43 were in urban residents.

The extra hazard presumably inherent in the rural areas may be referable to the absence of, or less effective, mosquito control and to the increased exposure to the vector which is a concomitant of the conditions under which agricultural laborers work and live.

CLINICAL ASPECTS

It is virtually impossible to distinguish between western equine encephalitis and the St. Louis type solely on a clinical basis, and it is extremely difficult to differentiate these two specific viral encephalitides from a multitude of other encephalitides. (This aspect will be considered further in the discussion of differential diagnosis.)

In general, the symptoms and signs are those associated with any encephalitis of infectious origin. There is commonly an abrupt onset, with symptoms similar to those in many other acute systemic infections. The illness usually begins with high fever, malaise, headache, stiffness of the neck, and chilly sensations or, sometimes, frank chills. The fever generally reaches 102° to 103° F. and is of the continued type. In severe cases it may go as high as 106° F. The fever reaches a maximum in two to three days and remains elevated for several days, then gradually declines. The duration of fever is usually from seven to ten days.

Evidence of central nervous system involvement generally is not manifested until the third to fifth

day following onset of the illness and the effect may range from minimal to severe. Signs of central nervous system involvement generally appear at about the time the fever approaches its maximum.

In infants, encephalitis may be evidenced by apathy, muscular twitchings, restlessness, irritability, stiffness of the neck, difficulty in feeding, convulsions, and increased tension of the fontanel.

In the course of their illness adults usually have severe headache and stiffness of the neck, sometimes with increased irritability, tremor, some degree of mental disturbance (drowsiness, apathy, lethargy, stupor, coma), disorientation, speech difficulties, and, occasionally, extraocular muscle disturbances (diplopia, strabismus, ptosis, etc.). Transient abnormalities in reflexes are the rule. Muscle weakness may occur, but frank paralysis is not commonly encountered.

Differential diagnosis. Clinical differentiation of illness produced by the western equine and the St. Louis viruses from other encephalitic syndromes is extremely difficult. Viral diseases frequently confused with western equine and St. Louis encephalitis are non-paralytic poliomyelitis; encephalitis associated with, and secondary to, other acute infections, such as mumps, herpes simplex, measles, and chickenpox; postvaccinal (smallpox or rabies) encephalitis; rabies; and lymphocytic choriomeningitis.

In addition to the specific viral conditions just listed, other clinical entities which may produce similar clinical findings must be considered in making a diagnosis—tuberculous meningitis; coccidioid meningitis; tetanus; cerebral malaria; brain tumor; cerebrovascular disease; sunstroke; and von Economo's disease.

Some of these conditions can be tentatively eliminated from consideration as western equine or St. Louis encephalitis on the basis of clinical manifestations or characteristics, while others can be confirmed or ruled out only on the basis of results of laboratory tests.

Specifically, there are several helpful points of differentiation. The usual high fever of western equine and St. Louis encephalitis and the rather abrupt onset contrast with the relatively lower fever and insidious onset of poliomyelitis. The occurrence of chills is indicative of encephalitis rather than poliomyelitis. If frank paralysis develops, encephalitis is unlikely.

Microscopic, cultural, and immunologic examination of the cerebrospinal fluid assists in establishing or discarding a diagnosis in the purulent bacterial meningitides, tuberculous meningitis, and coccidioid meningitis. A high content of lymphocytes in the spinal fluid may indicate lymphocytic choriomeningitis (apparently rare in California), aseptic meningitis (Wallgren), or suggest the possibility of mumps meningoencephalitis. In western equine and St. Louis encephalitis there is generally an increase in the number of cells in the spinal fluid (neutrophils early in the disease, lymphocytes later

in its course) and in the protein content. These pathologic changes reflect the invasion of the central nervous system by the virus but give no assistance in identifying the virus.

A history of a preceding acute illness may in itself suggest the correct diagnosis of encephalitis associated with measles, mumps, varicella, influenza, etc.

It is important to recognize that encephalitis due to mumps virus is not uncommon and that it may and does occur as the first and only manifestation of infection with this virus—that is, without clinical evidence of coexisting glandular involvement. The diagnosis in such cases is suggested by a history of exposure to mumps, and is confirmed by examination of serial blood specimens to ascertain the presence of a rising antibody titer. In California in 1949-1950, a diagnosis of mumps encephalitis was substantiated by laboratory tests in 83 cases.

Postvaccinal encephalitis is readily separated from other conditions when adequate inquiry is made into the use of prophylactic vaccines prior to the onset of the illness. The most common incitants of postvaccinal encephalitis are anti-rabies (Pasteur treatment) and smallpox vaccine. The latter is a hazard primarily in children over one year of age. Similarly, history of a wound would suggest tetanus; the bite of an animal, rabies.

Examination of blood smears may be utilized to determine whether or not the illness is caused by the malarial parasite.

Cerebral accidents and brain tumor may be differentiated on the basis of localized and localizing neurological abnormalities in the absence of evidence of a systemic infection.

In summary, the history, the symptoms, the observations in physical examination and the results of the usual clinical laboratory tests will generally permit the arrival at an early, although tentative, diagnosis of encephalitis caused by a living agent. Several points may be of assistance in differentiating St. Louis and western equine virus infections from other encephalitides in this broad group. On the basis of current knowledge, a case of clinically diagnosed encephalitis is more likely to be one of western equine or St. Louis encephalitis if it was contracted in the Central or Imperial valleys and onset was during the months of June through October. In addition, the tenability of a diagnosis of western equine or St. Louis encephalitis is increased if the patient is a male, and is further enhanced if the patient is from a rural area. It should be emphasized at this point that these epidemiologic criteria are generalizations from information thus far available, and should not be interpreted to mean that infections with the western equine or St. Louis viruses may not occur in other circumstances. Continued epidemiologic observations are necessary to assess the validity of these working considerations.

For final etiologic diagnosis of western equine or St. Louis encephalitis, laboratory studies are necessary.

LABORATORY DIAGNOSIS

One method of establishing the diagnosis is the isolation of the causal agent. However, the isolation and subsequent identification of viral agents is still in major part a research procedure, and involves considerable time, effort, and expense. Attempts to isolate a virus from such material as throat washings and spinal fluids, therefore, are not warranted for routine diagnostic purposes;* serologic methods will generally give valuable information much more readily and quickly, and at less cost.

Viral isolation studies, however, are desirable, and indeed mandatory, if etiology with regard to encephalopathic conditions is to be advanced. Whenever possible, tissues taken at postmortem should be tested by animal inoculation for the presence of viral agents. Only by such continuous search will new agents be uncovered and their importance in the causation of human illness be assessed. Central nervous system tissue obtained at postmortem should be taken with aseptic precautions, and generous blocks (3 cm. x 3 cm. or larger) placed individually into separate sterile, wide-mouthed tubes or jars, which should be tightly closed. The specimens should immediately be frozen on dry ice or in the freezing compartment of a compressor-operated refrigerator and kept frozen until tested. If it is necessary to send specimens to a laboratory at some distance, the containers should be shipped under dry-ice refrigeration. This can be accomplished by packing the specimen containers in a cardboard carton containing dry ice and a filler such as crumpled paper or sawdust to take up the space released by evaporation of the dry ice.

For diagnosis of the viral encephalitic diseases, spinal fluid is frequently submitted to the laboratory with a request that virus isolation be attempted. Unfortunately, so seldom is a virus isolated from the specimen submitted that the procedure is considered of dubious value in the diagnostic armamentarium. As such viral agents are highly labile at ordinary room temperatures, the difficulty may be attributable to lack of refrigeration of specimens in transit, making them worthless for viral isolation purposes.

Diagnosis of western equine and St. Louis virus infections also can be made by serologic methods, and this is the procedure generally followed. It should be kept in mind that at least two specimens of blood are required. One specimen should be taken as early as possible after the onset of illness (acute-phase blood), and another taken 10 to 14 days after the first (recovery- or convalescent-phase blood). Two (or more) specimens of blood are essential because diagnosis depends upon the ability of the laboratory to demonstrate that specific antibodies have appeared, or that a significant rise in antibody titer has occurred, during the course of the patient's illness. Single specimens of blood are

* In those circumstances in which attempts at virus isolation appear desirable, a virologist should be consulted as to the type of material required, how and when it should be obtained, etc.

of little or no value in laboratory diagnosis, for the mere presence or absence of antibodies is inconclusive. Antibodies in acute-phase serum may be either newly-developed as a result of the current illness or present because of exposure to the agent at some time in the past. Conversely, the absence of antibodies in an early blood specimen does not rule out the disease in question; antibodies may appear later in the course of the illness. The results of examination of only a single specimen taken in the recovery or convalescent phase may likewise be difficult or impossible to interpret. A negative result in the convalescent phase generally may be taken to rule out the disease in question. A positive result, however, may be interpreted only as inconclusive if there is a low titer of antibody, or as presumptively positive if a high titer, comparable to that generally observed in recovered patients, is present.

For the examination of sera, the complement-fixation and the neutralization tests are used. The specimens are first examined by the complement-fixation test, since this is a simple *in vitro* technique, with the results promptly available. The results of tests by this method are checked by the neutralization test which is performed in mice and requires from two to four weeks.

TREATMENT

Treatment of patients with western equine or St. Louis virus infections is entirely symptomatic and supportive. Maintenance of the fluid balance is essential, and prevention of complications (particularly pneumonia) by the use of antibiotics is frequently indicated. There is no evidence that the newer antibiotics exert any effect on the course of infection with these viruses.

PROGNOSIS

In general, prognosis for life is good. The fatality rates of 5 to 22 per cent commonly stated in textbooks are based upon data on only that small proportion of patients ill enough to require hospitalization.

Evidence of permanent cerebral damage is not uncommon in infants. In some outbreaks, 10 per cent to 40 per cent of patients under six months of age who were known to have the disease were reported to have neurologic residua.² These figures, however, are based on recognized cases; the data are not representative of the entire range of severity of infection.

PREVENTION

Detailed discussion of methods of prevention and control of western equine encephalomyelitis and St.

Louis encephalitis is not within the scope of this paper. Briefly, there are two avenues of approach—mosquito control, and specific immunization. Mosquito population reduction as a control measure is now under evaluation. Immunization of man against western equine encephalomyelitis is not widely employed; the vaccine is used primarily where the risk of infection is particularly great, as in laboratory workers. No specific vaccine against the St. Louis virus is available at present.

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Progressive Adhesive Arachnoiditis Following Spinal Anesthesia

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SUMMARY

Neurological complications—some of them serious—sometimes occur following spinal anesthesia. In the majority of the relatively few cases in which they occur, they are caused by factors which can be obviated.

Rigid adherence to defined safeguards will reduce the incidence of complications and overcome most of the objections to the procedure.

KENNEDY, Effron and Perry¹ in a recent communication citing 12 cases in which neurologic complications followed spinal anesthesia, concluded: "Spinal anesthesia is accompanied by many definite and terrible dangers which are far too little appreciated by surgeons and anesthetists. From a neurological point of view, we give the opinion that spinal anesthesia should be rigidly reserved for those patients unable to accept a local or general anesthetic."

Gunnar Thorsen,² who in 1947 reviewed the world literature and, in addition, analyzed the complications following spinal anesthesia in 2,493 cases, reached more moderate conclusions: "Whether [spinal anesthesia], performed by trained anesthetists, with present and future resources at their disposal, can be entirely replaced by less risky methods cannot as yet be decided. Until this is settled [spinal anesthesia], should . . . be reserved for major, complicated operations and those requiring complete muscular relaxation or a contracted intestine."

It is the purpose of this presentation to summarize the neurologic complications of spinal anesthesia, to report a case of progressive adhesive arachnoiditis following spinal anesthesia (with autopsy observations) and, finally, to present the authors' opinions as to the role of spinal anesthesia in modern surgery.

NEUROLOGIC COMPLICATIONS FOLLOWING SPINAL ANESTHESIA

Cerebral Manifestations. Of these, headache is by far the most common, occurring in from 1 per cent to 18 per cent of patients in the various reported series of cases. In addition, dizziness, disturbances of vision, and occasionally, mental disturbances may occur. It is generally accepted that the cause of these phenomena is a loss of spinal fluid which

passes from the subarachnoid space through the puncture hole into the subdural space, and thence out along the nerve roots. This results in intracranial hypotension with resultant traction on pain-bearing structures such as the vessels or the dura. Cranial nerves may be similarly involved.

Infection. There have been sporadic reports of spondylitis, epidural abscess, subdural abscess, encephalitis and meningitis following spinal anesthesia. These are obviously preventable complications.

Trauma. Direct trauma to the paravertebral musculature and ligamentous structures may result in low back pain of varying duration and intensity. Epidural and subdural hematomas also may occur. The most serious complications, however, arise from the injudicious choice of the site of puncture at or above the conus medullaris with resultant intramedullary injection of the anesthetic agent and subsequent mechanical and myelolytic destruction of the cord substance. Similar trauma may occur with inadvertent intraneural injection of a nerve root. Occurrence of focal peripheral pain immediately upon puncture should give adequate warning before intraspinal injection of the anesthetic agent is undertaken. The danger of trauma from catheterization of the subarachnoid space is being more and more frequently recognized. It is evident that the above complications due to trauma in performing spinal anesthesia can be avoided by scrupulous attention to the technique of administration.

Complications due to intraspinal injection of foreign agents. This danger has not been emphasized sufficiently in the past. Data given in reported cases of severe complications following spinal anesthesia do not eliminate the possibility of accidental injection of some agent physically indistinguishable from the anesthetic solution. For example, qualified anesthetists now store ampules of the solutions which are administered intraspinally (Pontocaine,[®] 10 per cent dextrose, ephedrine, or procaine-ephedrine mixtures, Nupercaine,[®] and Metycaine[®]) in a colored solution such as tincture of Zephiran[®] or Merthiolate.[®] Not infrequently the contents of the ampules assume the color of the dyed antiseptic solution, indicating defects in the glass of the ampules. In the past, colorless sterilizing agents such as Bard-Parker solution, alcohol, or dilute phenol solutions, were commonly used to sterilize ampules used in spinal anesthesia, and if the ampules were defective the anesthetic agent could have become grossly contaminated with a highly destructive agent which must, in turn, have caused irreparable damage to the intraspinal structures. One anesthetist who has been concerned with this problem has collected, in his own practice over the past three years,

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75 such contaminated ampules. Save for the warning tint absorbed from immersion in dyed solutions, they might have been used for injection. No flaws in the ampules were noted in close inspection.

Complications due to the spinal anesthetic agent. Experimental studies carried out on animals have revealed that all spinal anesthetic drugs are destructive to nervous tissue and the meninges if employed in excessive concentration. This degree of concentration is, however, far in excess of the concentrations normally used in clinical spinal anesthesia. Nevertheless, many cases in which damage to the nervous tissue and meninges has occurred following spinal anesthesia have been reported. This damage, observed at operation and autopsy, was identical with that produced experimentally. The changes may be either acute or chronic. Pathologic changes observed in the acute stage were pleocytosis and evidence of hyperemic inflammatory reaction of the meninges. In cultures of spinal fluid no bacterial growth was noted. In cases in which the spinal cord was involved, there were varying degrees of cellular and myelin degeneration, edema, and round cell infiltration, especially at the periphery. At the roots of the cauda equina there was disintegration and fragmentation of the myelin sheaths, and the axis cylinders were swollen and disintegrated.

The chronic stage is one of a progressive adhesive arachnoiditis. The leptomeninges become fibrotic and adherent to each other and to the cord and dura with resultant obliteration of the subdural and subarachnoid spaces except for residual cyst-like pockets containing xanthochromic fluid. Scarring of the meninges causes pronounced constriction of the cord. The blood supply of the cord becomes impaired. In microscopic examination, necrotizing arteritis, and degeneration of the fiber tracts, particularly those of Goll and Burdach, has been observed.

Clinically, the symptoms of the acute phase appear immediately or soon after anesthesia has worn off. The first manifestations may be those of meningitis—pain, meningismus, and urinary and bowel difficulties. These symptoms may be short-lived. True neurogenic symptoms may appear localized below the level reached by the anesthetic—that is, symptoms of a lesion extending partially or completely across the cord, conus medullaris syndrome, or cauda equina syndrome. These neurogenic symptoms may subside spontaneously, may remain permanently, or may progress to those of chronic progressive adhesive arachnoiditis. Frequently, the acute stage is minimal or absent, the chronic stage appearing after a varying period of time.

Two theories of the cause of complications following spinal anesthesia—exclusive of the heretofore minimized possibility of damage caused by a contamination of the anesthetic agent—have been proposed. One is that there may be individual sensitivity to the drug used. No agreement exists on this point. Second, the factor of concentration is of undoubted importance. Thus, in low spinal anesthesia, a cauda equina syndrome may appear,

whereas in high spinal anesthesia, and particularly after continuous or serial administration, the maximum point of damage seems to be in the region of the sixth to the eighth dorsal segments. This region is the lowest point of the dorsal kyphosis when the patient is supine, and consequently the point of maximum concentration.

CASE REPORT

The patient, a 47-year-old Negro, had symptoms and x-ray evidence of chronic duodenal ulcer with gastric retention. Subtotal gastric resection and vagotomy were done under continuous spinal anesthesia with Pontocaine-procaine mixture administered through the third lumbar intervertebral space. The total time of anesthesia was five hours. As the anesthetic effect wore off, the patient began to complain of pain in the back, radiating down the legs. He was unable to void urine and became incontinent of feces. These symptoms persisted, and in examination on the fourth postoperative day, scattered areas of hypalgesia and hypesthesia over the sciatic nerve distribution on both sides were noted. The temperature was 102.4°F. No evidence of motor weakness was elicited and no meningismus was present. There was atelectasis of the middle lobe of the right lung. The pain in the low back and legs gradually subsided, as did the fever, but the patient continued to have scattered areas of hypalgesia and hypesthesia over the sacral dermatomes, weakness of the gluteal muscles, urinary retention and loss of anal sphincter control. He was discharged, walking, on the 21st postoperative day.

Five months later the patient was again hospitalized. He gave a history of gradually increasing weakness and numbness of the legs and persistent lack of bladder and bowel control. In neurological examination, partial loss of response to touch, pain, and temperature below the sixth dorsal dermatome was noted, and there was complete loss of sense of position and of response to vibration of the toes bilaterally. Spastic paraplegia was present and abdominal and cremasteric reflexes were absent. Deep reflexes were increased, and extensor plantar responses were elicited bilaterally. Lumbar puncture was carried out. The spinal fluid was xanthochromic and it clotted spontaneously. A complete block was demonstrated by Queckenstedt's test. Result of a Wassermann test of the fluid was negative. In Pantopaque® myelography, scattered deposits of the medium up to the level of the eighth dorsal vertebra, characteristic of chronic adhesive arachnoiditis, were observed. Hemilaminectomy of the sixth dorsal vertebra was done. The dura appeared normal, but when opened was found to be thickened and adherent to the underlying cord which was grayish-white in color and covered by a tenacious thick membrane which was evidently a constricting fibrotic piaarachnoid. No free spinal fluid was present. A small, soft-rubber catheter could not be passed in any direction between the adherent dura and the cord. Obviously, no attempt could be made to resolve the firm adhesive arachnoiditis. After the operation there was no further extension of the neurologic deficits. On the fourth postoperative day, there was sudden onset of pulmonary and cardiac collapse and the patient died.

Postmortem examination was carried out, and death was ascribed to massive pulmonary embolism. Unfortunately the brain and its coverings were not examined. The dural sac with its enclosed spinal cord and cauda equina was removed in toto. Adhesive pachymeningitis was found to exist up to about the cervicodorsal junction. Cephalad of the junction, the meninges were thickened and white but only mildly adherent to the underlying cord. Caudad, over the whole extent of the spinal cord and cauda equina, there was a dense, grayish-white, avascular, plastic exudate surrounding

the cord and the cauda; and the cauda was adherent to the thickened overlying dura. Many small cystic pockets, containing gelatinous yellow fluid, were observed posterior to the cord.

Microscopically, the gross diagnosis of chronic adhesive pachymeningitis below D-4 was confirmed. In cross-sections of the cord in the cervical region degeneration, predominantly of the columns of Goll and less of those of Burdach was noted. Below D-4, the upper level of the severe constricting pachymeningitis, there was also demyelination of the posterior columns but surprisingly little evidence of degenerative changes in the cord tissue itself. Some demyelination at the periphery of the cord was observed. There was no evidence of cavitation or destruction within the cord. At the roots of the cauda equina there was very little demyelination or fragmentation of the axis cylinders, in spite of the pronounced chronic adhesive arachnoiditis about them.

Certain significant factors in the case reported should be emphasized. First, a continuous spinal anesthetic was administered over a long period of time. Second, the appearance of pain immediately after the anesthetic effect had worn off suggests the possibility that a foreign agent may have been inadvertently administered. Third, the fibrotic changes in the leptomeninges were progressive. Fourth, the pathologic changes were spread over that portion of the cord and meninges which had been in contact with the anesthetic agent, and they were largely confined to the meninges themselves, rather than to the cord. The cause of the spastic paraplegia, therefore, most probably was gradually constricting arachnoiditis with subsequent interference of adequate blood supply to the cord.

COMMENT

There can be no doubt that spinal anesthesia may result in serious neurologic complications. These complications, however, are rare; and that they occur at all need not necessarily condemn the method, because on careful analysis it appears that most of them can be avoided. The cerebral manifestations, such as headache, may be largely obviated by keeping the patient in Trendelenburg position for a sufficient period to assure sealing off of the arachnoid puncture opening. Infection and trauma obviously may be prevented by scrupulous attention to techniques. The possibility of inadvertent injection of a destructive contaminant also can be foreclosed. As to the possible noxious effect of the

anesthetic agent itself, there is no irrefutable evidence of individual sensitivity to the commonly employed anesthetic agents, except with regard to patients who already have disease of the spinal cord. Final among the factors considered as a cause of damage to the meninges and spinal cord is excessive concentration of the agent. With respect to this possibility, it is mandatory that the amount of anesthetic agent applied to any portion of the cauda equina or spinal cord be carefully calculated to achieve anesthesia without excessive concentration of the drug. Also it must be borne in mind that the insult of a repeated or long-continuous application of the anesthetic drug to one area of the spinal cord may result in the same damaging effect as occurs with one single toxic dose.

It is the opinion of the authors that while there are, as Kennedy and co-workers said, "definite and terrible dangers" of spinal anesthesia, complications are infrequent and may be avoided by the unvarying observance of the following safeguards:

1. Employment of a trained anesthetist.
2. Selection of only that patient, without intrinsic disease of the spinal cord or its coverings, for whom the particular advantages of spinal anesthesia are required.
3. Use of anesthetic drugs of proven safety.
4. Employment of colored solutions for sterilizing ampules containing the agents used in spinal anesthesia.
5. Accurate spinal puncture below the conus medullaris (no higher than the second lumbar intervertebral space).
6. Precise control of the level of anesthesia.
7. Avoidance of excessive concentration of the anesthetic agent at any one point.
8. Abolition of repeated or continuous spinal anesthesia with or without catheterization of the subarachnoid space.

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Asthma and Cardiac Dyspnea—A Differential Diagnosis

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SUMMARY

There appear to be no infallible guides by which to differentiate between cardiac insufficiency and asthma as a cause of dyspnea, wheezing and coughing in elderly patients. Many of the symptoms of one condition are also symptoms of the other. Even the results of therapeutic trial cannot be relied upon to establish diagnosis, for drugs effective in treatment of heart disease may also help relieve asthma, and vice versa.

Although there is no single factor that can be considered pathognomonic, there are certain symptoms and results of tests which are more strongly indicative of one condition than of the other. Careful evaluation of all factors, while it may not serve to establish unequivocal diagnosis, will provide a basis for judicious treatment of the patient.

OFTEN in the case of elderly patients with dyspnea, coughing and wheezing, it is difficult to determine whether the symptoms are ascribable to bronchial disease or to cardiac insufficiency. In considering the problem, it is well first to establish what is meant by the terms bronchial asthma and "cardiac asthma."

Swineford and Magruger⁸ adopted the purist's point of view, that asthma develops only in persons with allergic sensitivity and heart failure. Miller,³ on the other hand, distinguished between bronchial asthma due to cardiac disturbance and bronchial asthma due to other causes. The purposes of distinction would appear to be best served by discarding the term "bronchial" and using the term "asthma," in accord with standard nomenclature, as meaning the disorder in the bronchioles usually associated with the phenomena of allergy. And the cardiac disorder which so often causes symptoms much like those of asthma is paroxysmal left ventricular failure, most frequently due to hypertensive or arteriosclerotic cardiovascular disease, with varying degree of impaired coronary blood flow.

The typical attack of dyspnea of cardiac origin occurs at one or two o'clock in the morning, awakening the patient after two to four hours of sound sleep. Shortness of breath and wheezing, and a sense of a weight on the chest, cause the patient to sit up in bed. Often the attack is relieved in a few minutes by the coughing up of tenacious mucus, and the patient then returns to sleep for the remainder of the night. More severe attacks of dysp-

nea and wheezing may last minutes to hours; some may, of course, progress to pronounced pulmonary edema and death. The attacks may be infrequent, or they may occur nightly. In the latter case, the patient dreads going to bed and finds that he gets more rest spending the night in a chair.

Patients with asthma, in which the infectious factor predominates, often have quite similar symptoms. They, too, are awakened usually at three or four o'clock in the morning with dyspnea, wheezing and coughing, and relief usually follows the raising of a small amount of tenacious mucus which has been dislodged by inhalation of the fumes of burning stramonium leaves or by taking one of the sympathomimetic drugs. They, too, are comfortable during the day and dread the nights with the recurrence of paroxysms.

The primary mechanisms by which the symptoms in these two disorders develop are quite dissimilar. In the asthmatic patient, the primary changes are concerned with encroachment upon the lumen of the bronchiole, with changes in the musculature and in the submucosa, with an increase in the number of mucus-secreting glands, with changes in the mucosa itself, and with the accumulation of mucus and cellular elements in the already narrowed lumen. In the patient with respiratory distress of cardiac origin, a more elaborate succession of events has been described,^{1,2} following upon the primary failure of the left ventricle. In it are concerned decreased serum protein, changes in plasma volume, and an increase in blood volume in the pulmonary circuit. After the patient has been recumbent for several hours, the factors leading up to pulmonary edema manifest themselves as the characteristic symptoms. In many instances, after a period of time, the patient also has well-established changes in the bronchioles, especially in the submucosa, and the accumulation of inspired mucus in the somewhat narrowed lumen causes the perplexing wheeze.

The determination of which mechanism is primarily responsible in the development of dyspnea and wheezing is extremely important with regard to prognosis and treatment. One great cause of difficulty in differential diagnosis is the attempt to attribute symptoms to either one mechanism or the other. Often, in perplexing cases, the patient has both primary bronchial and cardiac disease. Riley⁶ aptly stated that when symptoms of both pulmonary and cardiac origin coexist, as frequently happens in the older age group, the clinical evaluation of each with respect to its contribution to the dyspnea and wheezing may be extremely difficult, if not impossible.

Short clinical reports on the cases of two elderly patients with dyspnea, coughing and wheezing will illustrate the point.

Presented before the Section on Allergy at the 80th Annual Session of the California Medical Association, Los Angeles, May 13-16, 1951.

CASE REPORTS

CASE 1: A 70-year-old mortician was first observed in June 1947 with complaint of coughing, wheezing and dyspnea, chiefly at night, and particularly persistent in the previous three months. The patient had had perennial asthma at age 19, while living in Ohio. The attacks diminished in frequency and severity after he moved to the Pacific Northwest.

Upon examination it was noted that the lung fields were clear and there was no peripheral edema. The blood pressure was at all times within normal limits. In fluoroscopic examination, cardiac enlargement of aortic configuration was observed, with flattened diaphragms and evidence of some pulmonary fibrosis and emphysema. Seventeen per cent of the leukocytes in the sputum were eosinophils. In preliminary testing with common inhalants there was significant reaction to feathers and to house dust. An electrocardiographic tracing was definitely abnormal, with evidence of bundle branch block the principal feature (Figure 1). Clinical symptoms, however, suggested asthma due probably to both inhalant and infectious factors. Symptomatic treatment with iodides and aminophylline was given and further allergic sensitivity studies were begun. However, the respiratory distress became more pronounced and more continuous. The pulse rate at rest remained at 96, and the clinical symptoms became more apparently those of failing left ventricle. Appropriate therapy was instituted, including bed rest, low sodium intake and digitalization. Within three days the patient became asymptomatic. There was moderate diuresis with loss of eight pounds or more in body weight. As the patient then was able to resume greater activity, allergic sensitivity studies were completed and treatment with autogenous vaccine and the ubiquitous inhalants was started. A maintenance dose of 0.1 gm. of digitalis leaf daily was given, and after several months, the previous conduction defect was absent from electrocardiographic tracings (Figure 1). In the ensuing three and one-half years the patient worked daily at his profession. In that period of time he was observed twice in what appeared to be typical asthmatic attacks following a respiratory tract infection. Each attack responded within 24 hours to iodide given orally and one intravenous injection of aminophylline.

CASE 2: An 84-year-old widow was referred, with a diagnosis of asthma, by an internist. As the patient was obviously senile, there was ground for suspicion that advanced degenerative changes in the cardiovascular system were responsible for the respiratory distress. The patient had had attacks of coughing, wheezing and dyspnea over a period of 24 years. The attacks occurred at irregular intervals, without apparent relation to season or common allergens, and sometimes were so severe as to cause transient loss of consciousness. The patient recalled having had seasonal hay fever many years ago, while living in the Puget Sound area, and symptoms of chronic perennial rhinitis with recurring nasal polyps. Bacterial vaccine therapy and change of climate had given no relief. Epinephrine, by injection, was no longer effective; and inhalation of 1 per cent epinephrine solution, once effective, was becoming less so.

On physical examination, moderate tachycardia and evidence of moderate emphysema were noted. The blood pressure was 130 mm. of mercury systolic and 60 mm. diastolic. No significant abnormalities were noted in auscultation of the heart. Five per cent of the peripheral blood cells were eosinophils but there was no eosinophilia in the sputum. In an electrocardiographic tracing (Figure 1) there was a well-established bundle branch block.

As the dyspnea and wheezing appeared, from this evidence, to be caused by cardiac insufficiency, a low sodium diet was prescribed, and digitoxin (on a dosage schedule for slow digitalization) and aminophylline were given. The patient

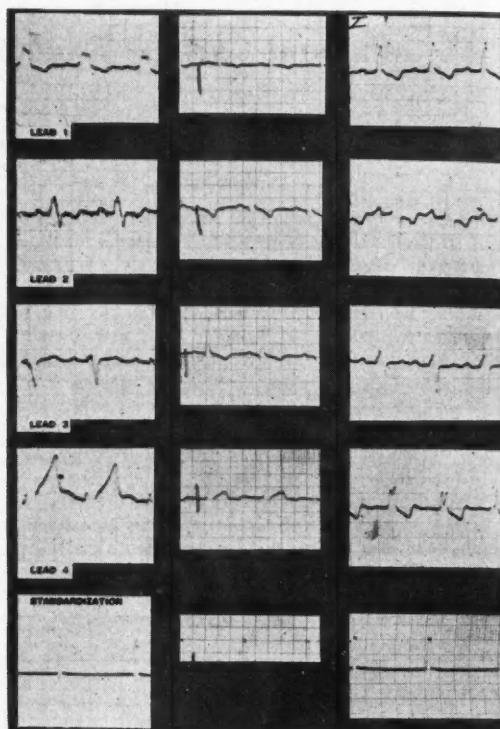


Figure 1.—Left: Electrocardiogram (Case 1) taken July 2, 1947. Center: Electrocardiogram of same patient, April 22, 1948. Right: Electrocardiogram (Case 2) taken May 13, 1948.

was admonished to discontinue the use of sympathomimetic drugs, especially by inhalation.

Despite conscientious cooperation, there was no improvement, and attacks continued to occur nightly. Reevaluation of the probable cause of wheezing and dyspnea was indicated. Since the digitoxin caused no reduction in pulse rate, or diuresis, or symptomatic improvement, the drug was discontinued. A regimen with potassium iodide, small doses of ephedrine and an occasional subcutaneous injection of epinephrine was started. The patient then improved slowly. When last observed, after a year on this regimen, the patient had had mild respiratory distress only occasionally after respiratory tract infection. She was taking one or two half-tablets of Tedral® a day, and an injection of 0.2 cc. of epinephrine once or twice a month. The chief night distress was moderate nasal obstruction which was controlled by use of an antihistaminic drug.

The original diagnoses of the primary cause of the respiratory distress in these two cases were far from correct. In the first case, the preponderance of evidence seemed to indicate asthma. Yet, at the time of acute recurrent respiratory distress, there was dramatic response to treatment for cardiac disease.

In the second case, in which there was no good evidence of asthma, heart failure seemed most probably the cause of respiratory distress. However, there was no improvement when adequate treatment for cardiac insufficiency was carried out, but

good response when iodides and sympathomimetic drugs were given.

In many instances the final recourse in the differentiation of the cause for paroxysmal respiratory distress in an elderly patient is therapeutic trial. Fortunately for the patient, certain drugs, especially the soluble theophylline preparation and iodides, cause little or no undesirable side effects, and the former may help to release both asthma and cardiac dyspnea. Epinephrine, subcutaneously, may also relieve cardiac dyspnea,⁵ although much less dramatically than it relieves asthma. As the alternate effectiveness of these drugs only adds to the confusion, even therapeutic trial cannot be relied upon for differentiation. Although there are no infallible guides, there are certain observations and procedures that will help toward a better evaluation of the cause for dyspnea and wheezing in elderly patients and provide a basis for more judicious treatment.

Indicative of asthmatic origin:

1. A long history of asthma or other allergic diseases.
2. Other manifestation of allergic reaction.
3. Sputum tenacious and containing Charcot-Leyden crystals, eosinophils, and Curschmann spirals.
4. Eosinophilia in blood and secretions (nasal and bronchial).
5. Circulation time normal or even shortened.
6. Response, often dramatic, to iodides and sympathomimetic drugs.

Indicative of cardiac origin:

1. History or evidence of cardiovascular-renal disease.
2. Moist basilar rales in addition to sonorous and sibilant rales.
3. Sputum more fluid or frothy and even blood-tinged, without Charcot-Leyden crystals or eosinophils.
4. Respirations more rapid and the two phases less disproportioned.
5. Circulation time prolonged (whether asthma coexists or not).⁴

6. Good response to treatment for cardiac insufficiency (including bed rest, digitalis, and mercurial diuretics).⁷

DISCUSSION

In the enumeration of points indicative of each of the causes of respiratory distress, it is quite evident that there is no pathognomonic factor by which to establish a single etiologic diagnosis. Prolonged circulation time would seem to be the factor most strongly indicative of cardiac disease and eosinophilia of asthma; yet often in obviously asthmatic patients eosinophilia is not present, and often in the presence of unquestionable paroxysmal left ventricular failure there is no significant lengthening of circulation time. And so it becomes evident that a frequent error is failure to keep in mind that in mild congestive heart disease an intrinsic bronchial disorder may become prominent. On the other hand, it must not be overlooked that a patient with a long history of bronchial asthma is just as liable to cardiovascular disease as is a patient who never had asthma.

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Extraperitoneal Pneumography

A Preliminary Report

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SUMMARY

The presence of a gas in the retroperitoneal tissues makes possible a radiologic visualization of retroperitoneal organs and masses. Retroperitoneum is accomplished by the injection of oxygen at low pressure into the tissues lying between the coccyx and the rectum. The technique of injection is simple and no complications have occurred with the first 30 cases. This method is particularly useful in outlining the kidneys and adrenal glands.

EXTRAPERITONEAL pneumography is a procedure in which a gas is injected into the extraperitoneal areolar tissue as a contrast medium to aid in roentgenologic visualization of the viscera which it surrounds. Carelli^{3,4} demonstrated in 1921 that carbon dioxide introduced into the renal fascia outlined the kidney, the kidney capsule and the adrenal glands. Cahill² reported in 1935 that he was able to determine the presence of hypertrophy and tumors of the adrenal gland by the use of this method. He also studied the adrenal gland in some patients with Addison's disease. Bariani¹ noted that when pneumoperitoneum was carried out there was sometimes an accidental diffusion of air between the parietal peritoneum and the transverse fascia which outlined the contour of the posterior abdominal viscera remarkably well.

Rivas⁶ was the first to utilize generalized extraperitoneal emphysema for diagnostic purposes. By injection through a single puncture into the retrorectal areolar tissue, he produced diffuse and extensive emphysema in the cellular tissue of the entire body. This outlined the posterior abdominal viscera on roentgenograms better than previously used methods. Rivas termed this procedure retroperitoneum.

ANATOMY

The anatomy of the extraperitoneal tissue has been extensively described by Rivas⁷ and will be presented only briefly in this report. Between the fascia which covers the inner surfaces of the abdominal muscles and the peritoneum lies a considerable amount of extraperitoneal areolar tissue

loaded with fat. It is part of an extensive layer which lines all the body cavities outside the various serous sacs, and it is continued on the various vessels, nerves and other structures which pass from the trunk into the limbs.

In the abdomen it is divisible into a parietal and a visceral portion. The former lines the walls, while the latter passes between layers of the peritoneal folds to the viscera. The parietal portion is thin and comparatively free from fat over the roof and anterior wall of the abdomen. In the pelvis this tissue is loose and fatty, and is continued up for some distance on the anterior abdominal wall, thus permitting the ascent of the bladder during its distention. In the posterior wall the tissue is large in amount, and fatty, particularly where it surrounds the great vessels and kidneys.

The visceral portions extend from the parietal portion along various branches of the aorta. The extensions are connected with the areolar coats of the blood vessels and pass with them into the mesenteries and other folds of the peritoneum, and thus reach the viscera.

The chief functions of the extraperitoneal tissue are to unite the peritoneum to the fascial and muscular layers of the abdominal wall, and to connect the viscera to the wall and to one another in such a loose manner that there will be no interference with their distention or relaxation. In addition, it is a storehouse of fat, forms sheaths for the vessels and nerves, and establishes, through a vascular plexus, communication between the parietal vessels and those distributed to the abdominal viscera.

TECHNIQUE

The authors used a procedure by which satisfactory roentgenographic outlines of some of the retroperitoneal organs were produced without causing great discomfort to the patient.

The equipment and materials used were: A local anesthetic ointment; 0.5 per cent procaine solution; a No. 20 or No. 22 spinal needle; a No. 26 hypodermic needle; a 5 cc. syringe; two Kelly bottles and rubber tubing connected to provide injection pressure as used for pneumothorax, and a pressure source of oxygen. Oxygen rather than carbon dioxide was used as the contrast medium because the rate at which it is absorbed is slow enough to give adequate time for satisfactory roentgen examination before the contrast begins to diminish. Air, which is absorbed even more slowly, would of course give more time for examination, but with it there would

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be greater hazard of serious embolism should a vascular channel be invaded. A further advantage of oxygen is that it is available on any anesthetic equipment.

In most patients the tip of the coccyx is easily palpable relatively high in the internatal cleft; the injection needle may then be most easily inserted with the patient on his left side with knees drawn up. In the case of the obese patient with large but-

tocks, the coccyx lies deep in the internatal cleft and the lithotomy position has been found to be the position of choice.

The anus is anesthetized with anesthetic ointment. The injection site is then prepared with antiseptic solution. A skin wheal of procaine is raised in the midline between the anus and coccyx, 1 to 2 cm. from the latter. The spinal needle, with stylette removed so that vascular intrusion will be obvious if it occurs, is then inserted through the skin and subcutaneous tissue until the tip impinges upon the tip of the coccyx. The index finger of the opposite hand is placed in the rectum and the needle is then redirected so as to slide along the anterior surface of the coccyx and through the anococcygeal raphe. The needle is then inserted another two or three centimeters, always with the point as far posterior as possible to avoid perforating the fascia propria of the rectum (Figure 1). The plunger of the syringe is withdrawn slightly to test for the perforation of a vessel and, if no blood is withdrawn, 2 or 3 cc. of air is injected. If the air does not flow easily, moving the needle or ballotting the point with the rectal finger usually will produce adequate flow.

If a generalized extraperitoneal pneumogram is desired, the patient is placed in the prone position with the head of the table tilted 10 to 15 degrees upward. If visualization of a single side is desired, the patient is placed in the lateral position with that side elevated and the table at the same angle as

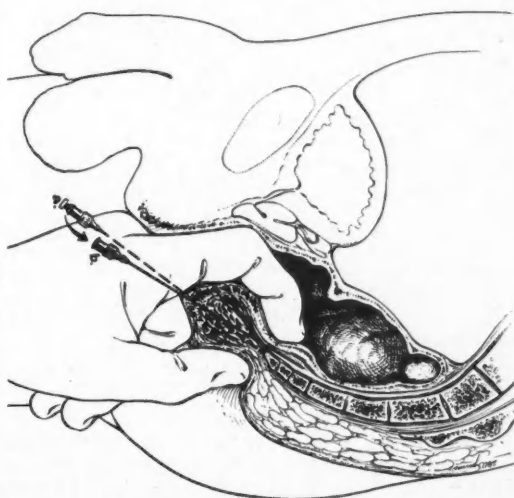


Figure 1.—Placement of the needle: (a) Plane of insertion to depth of coccygeal tip. (b) Final position for injection above anococcygeal raphe.

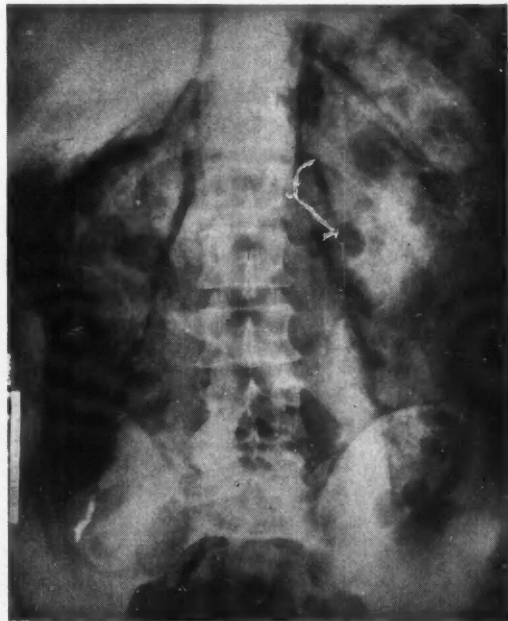


Figure 2.—Normal extraperitoneal pneumogram. The kidneys, adrenals, psoas shadows, liver, spleen and bladder are outlined by gas.



Figure 3.—The gas outlines the posterior pelvic viscera well on the left side, but poorly on the right side. The patient lay on his right side soon after injection so that the gas rose to the elevated left side. A subsequent extraperitoneal pneumogram demonstrated the posterior pelvic viscera on the right side well.

before. The oxygen supply is then attached to the needle by means of a sterile section of rubber tubing containing a cotton filter. The oxygen is allowed



Figure 4.—Right hypernephroma. The extraperitoneal space on the right side is occupied by a large, partially calcified mass. The kidney, adrenal gland, and spleen are well outlined on the left side. There is no gas in the extraperitoneal tissue on the right side because the areolar tissue is compressed by the large mass.



Figure 5.—Same patient as Figure 4. The lateral view demonstrates the left kidney well. The renal artery can be seen.

to flow in at a rate of about 100 cc. per minute under pressure of 20 cm. of water. If greater pressure is needed, the position of the needle is not correct and must be adjusted. Volumes varying from 200 cc. to 1,200 cc., depending upon the size of the patient, have been used in the studies to date. In those patients with little properitoneal and perinephric fat, adequate roentgenograms are produced with volumes as low as 600 cc., whereas in the well-padded patient a liter or more is required.

During the insertion of the needle a finger is placed in the rectum to keep the injector aware of the position of the needle point. If the rectum is perforated, or blood is withdrawn after the needle has reached the anococcygeal raphe, the needle is withdrawn and the examination postponed for 24 hours. If subcutaneous emphysema appears around the perineum, the needle has not been inserted far enough and still rests outside of the anococcygeal raphe. It must be inserted at least another 2 cm.

Patients who underwent this procedure were remarkably free from discomfort. A fullness in the region of the rectum was usually noticed first. Some patients noted a dull ache in the flank after 400 to 500 cc. of the gas was injected. In no case was this severe enough to interfere with the examination.

The patient remains in the position in which the gas was injected until roentgenograms are obtained. The posterior abdominal organs are usually best demonstrated about two hours after the injection has been completed. By that time the gas has extended throughout the extraperitoneal areolar tissue. Stereoscopic anteroposterior and lateral films are taken routinely. Tomography or body-section roentgenography has been found to be particularly helpful in that it eliminates the confusing shadows

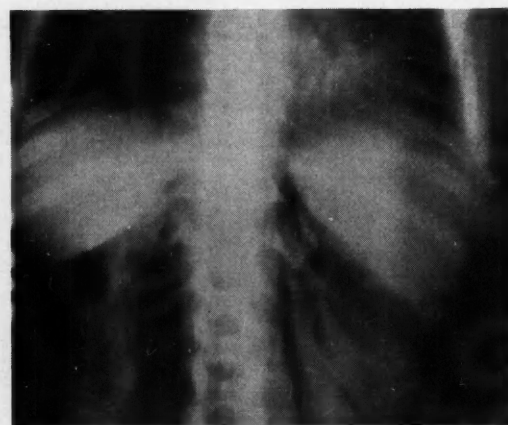


Figure 6.—Tomogram of a patient with Cushing's syndrome. The left adrenal gland is the triangular shadow outlined by gas above the superior pole of the left kidney. This gland appears to be normal. There is very little gas above the superior pole of the right kidney. An exploratory operation of the right adrenal gland was performed. It was found that the right adrenal gland was imbedded in firm areolar tissue which was separated with considerable difficulty. It freed quite easily from the upper pole of the kidney. It measured 4x2x0.5 cm. and was firmer than normal. Histologically there was evidence of hyperplasia.

caused by gas in the gastrointestinal tract and anterior abdominal wall. Additional films are taken as the need arises.

DISCUSSION

Rivas chose to inject the gas into the retrorectal areolar tissue because of its accessibility, its proximity to the extraperitoneal tissue of the posterior abdomen, and because of the absence of large blood vessels and vital viscera in that region. As the gas is injected at this site, it surrounds the rectum and extends into the cellular tissue of the parametrium which envelops the uterine tubes and ovaries. The gas extends upward along the psoas muscles, mid-abdominal vessels, kidneys, spleen and attachments of the diaphragm. The kidneys have their own closely adherent capsule around which is the sheath known as Gerota's sheath or capsule. This capsule encloses the upper part of the kidney and the adrenal gland. It is incomplete caudally where it communicates with the extraperitoneal areolar tissue, which also surrounds the capsule. The injected gas passes around Gerota's fascia and also extends through the defect inferiorly to outline the kidneys and adrenal glands. Some of the gas passes along the vessels into the mesentery and cellular tissue between the visceral peritoneum and wall of the stomach and bowel. If enough gas is injected it will rise into the extrapleural and mediastinal connective tissue through the apertures formed by the fibrous insertions of the diaphragm to the skeleton, and through the areolar tissue surrounding the great

vessels and esophagus. The gas then passes into the areolar tissue of the neck.

The most important organs outlined by the gas are those in the pelvis and posterior abdomen. The gas injected into the retrorectal space helps in visualization of the uterus, tubes, ovaries and bladder, but these structures are partially obscured by gas surrounding the rectum and in the anterior abdominal wall. It has been found that gas may be injected directly into the cellular tissue of the parametrium through the vagina, thus outlining only those organs. The psoas muscles are sharply outlined. The external contours of the kidneys and adrenal glands stand out in contrast to the gas within Gerota's fascia. The margins of the spleen and liver are easily identified by the presence of the gas between them and the peritoneum (Figure 2).

The authors have been disappointed, as have the European investigators, in being unable to visualize the normal pancreas. This probably is due to the relatively small amount of areolar tissue surrounding it. It is hoped, however, that if a tumor or cyst of the pancreas that is not limited to the midline is present, it will be possible to visualize the lesion on either side of the midline where the areolar tissue is more abundant.

The procedure described was used in examination of 30 patients. There were no complications. Only one of the patients complained of more than mild discomfort. That patient, a woman, had pain in the back and it appeared to increase after the gas was injected. Three of the subjects were outpatients, and

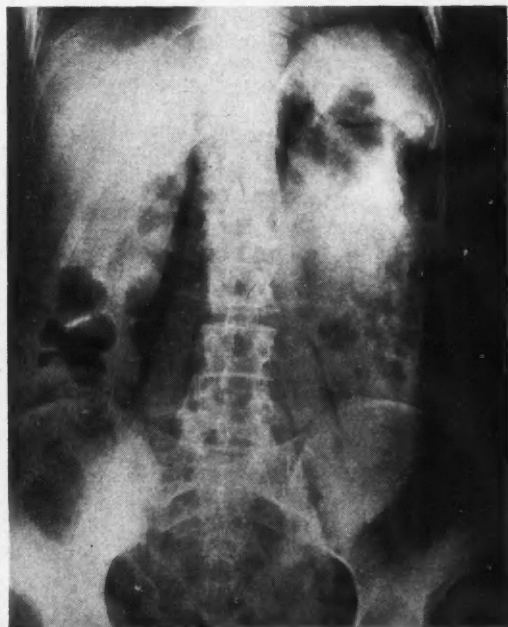


Figure 7.—Retroperitoneal tumor on the left side diagnosed as lymphoid hyperplasia by the pathologist. There is an absence of gas in the retroperitoneal areolar tissue lateral to the left psoas muscle. This is due to compression of the extraperitoneal tissue by the tumor mass.



Figure 8.—Retrograde pyelogram demonstrating hydronephrosis and dilatation of the upper part of the left ureter, due to compression of the ureter by a metastatic mass. This patient had a carcinoma of the cervix.

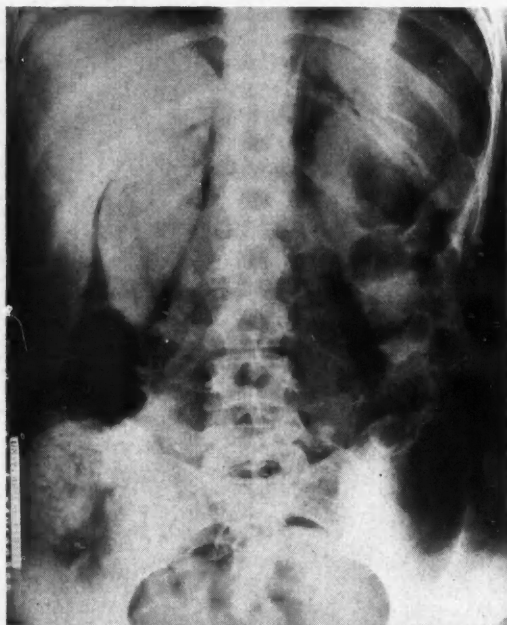


Figure 9.—Same patient as in Figure 8. Extraperitoneal pneumogram demonstrating the left hydronephrosis. The dilated kidney pelvis and upper part of the ureter on the left side can be seen medial to the kidney shadow.

they were permitted to return home on completion of the examination. One of the patients, who had paroxysmal tachycardia following a coronary occlusion, had no ill effects from the examination.

Pathologic conditions visualized by this method were: A lesion of the lumbar spine which caused distention of the paraspinal ligaments; hypernephroma; a retroperitoneal tumor; and in two cases, hydronephrosis which was not demonstrable by usual urological diagnostic techniques.

Extraperitoneal pneumography appears to be a valuable method for examining the posterior abdominal and pelvic viscera:

1. It is simple. The needle is inserted into the cellular tissue between the rectum and sacrum—a relatively easy procedure.

2. It appears to be safe. As there are no large vessels in the retrorectal space, there is little danger of air embolus.

3. The injection is not painful.

4. Only one puncture is necessary for diffusion of oxygen to both sides.

5. Structures other than the kidneys and adrenal glands are made visible.

ACKNOWLEDGMENT

The authors wish to express their appreciation for the advice and help given in the preparation of this paper by Dr. Robert S. Stone, chairman of the Division of Radiology, University of California School of Medicine.

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Experimental Investigations on Action of Antihistaminic Nasal Solutions

A Preliminary Report

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SUMMARY

The effect of antibistaminic drugs in the form of solutions for nasal instillation on the mucous membranes of rabbits was investigated. So far as histologic observations would indicate, Antistine®-Privine® was the most harmful and caused almost complete necrosis throughout the entire nasal area. Pyribenzamine® was the least harmful. Allergan® caused more damage than did Pyribenzamine in the nasal mucosa of rabbits, but considerably less than Antistine-Privine.

Clinically, the author has observed Antistine-Privine to be extremely irritating when employed as a topical application for symptomatic relief of nasal allergic disease. Pyribenzamine has caused considerable pain and discomfort in patients and has been least effective for relief of nasal congestion since it does not contain a vasoconstrictive agent. Allergan has not been observed by the author to be irritating to any degree in patients with nasal allergic disease unaccompanied by acute infection, and it has been noted to be the least irritating of these three antibistaminic solutions in nasal allergic disease complicated by infection.

ANTI-HISTAMINIC drugs in the form of solutions for nasal instillation have been advertised widely as effective in the symptomatic relief of allergic diseases of the nose. The author has used a number of these preparations, some of which contain vasoconstrictive agents, for this purpose and also in treating nasal allergic reaction complicated by acute infection.

To supplement clinical observations, experiments were carried out to investigate the effect of such solutions on the mucous membranes of rabbits. This animal was selected as the most suitable because in it the nasal mucosa is comparable histologically to

that of man, and because its large nasal accessory sinuses (the maxillary sinus being a part of the nose) are readily accessible to nose drops. Furthermore, the large area of olfactory mucous membrane in the posterosuperior portion of the rabbit's nose probably is more susceptible to injury than is that of man.

METHOD OF STUDY

As a preliminary step a test was made to determine the amount of mucosal surface covered by the nose drops. One animal was selected, and ten drops of a 1 per cent solution of gentian violet was placed in each nostril. At autopsy the entire mucous membrane of the nose and portions of that of the bronchial tree and the lungs were found to be stained with the dye.

In the present study 12 animals and three different antihistaminic solutions were used. Three animals were used in each of four series. Ten drops of one of the following solutions were instilled in each nostril:

Series 1: Antistine®-Privine® (antistine hydrochloride 0.5 per cent and privine hydrochloride 0.025 per cent) three times daily for 14 days.

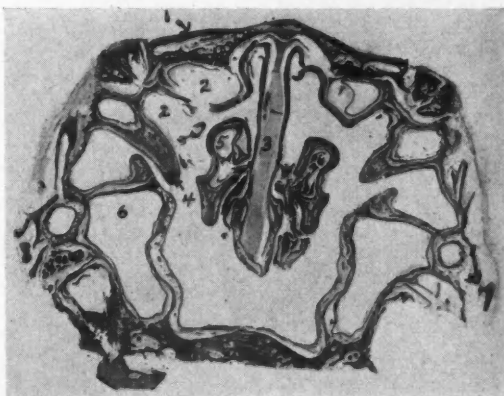


Figure 1.—Normal nose of a rabbit. Section from posterior block. 1 indicates the nasal bone; 2, the ethmoid cells; 3, the nasal septum; 4, the middle turbinate (the ethmoturbinal proper); 5, the vomeronasal organ, and 6, the maxillary sinus.

Series 2: Allergan® (pyranisamine maleate 0.1 per cent and phenylephrine hydrochloride 0.25 per cent) three times daily for 14 days.

Series 3: Allergan® twice daily for 30 days.

Series 4: Pyribenzamine® (0.5 per cent) three times daily for 14 days.

The animals were killed by intravenous injection of air immediately after the last instillation. The head was fixed in solution of formaldehyde U.S.P. After fixation, the nose was removed in one block and embedded in paraffin, and then was divided into ten blocks serially. Two sections from each block were examined histologically to determine the amount of injury or destruction, if any.

Nasal sections from three apparently normal rabbits, not subjected to the nasal instillations, were studied as controls.

RESULTS

In none of the 12 animals was there evidence of discomfort.

Some of the various degrees of histologic changes observed in the nasal mucosa of the rabbits subjected to the antihistaminic solutions may be observed in the accompanying photomicrographs. Similar nasal sections from the control animals are presented for comparison.

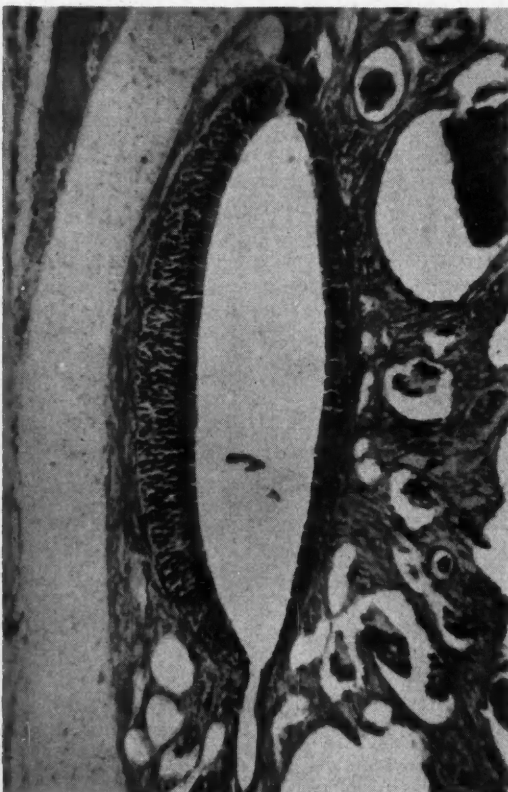


Figure 2.—Normal nasal mucosa of a rabbit. Section of a vomeronasal organ from the anterior block.

Results of a study of the histologic observations are summarized in Table 1.

Two sections from the anterior, the mid-anterior, the middle, the mid-posterior and the posterior portions of the nose in each animal were studied. The observations were recorded according to the progressive degree of damage. Each degree was assigned a numerical equivalent. The numerical equivalents of the greatest degree of damage observed in each portion of the nose in each animal were added to determine the total of injury at all sites (see Table 1).

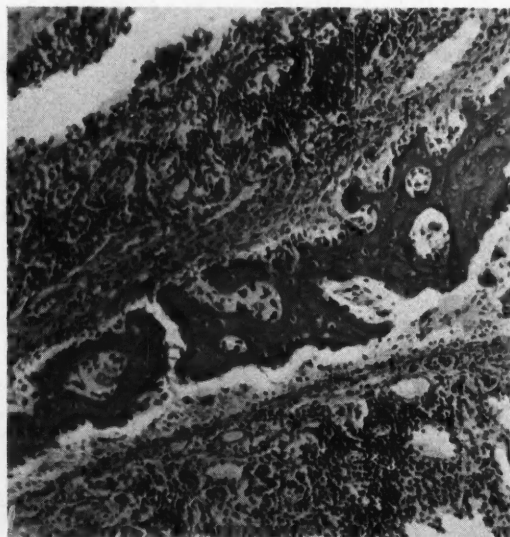


Figure 3.—Rabbit's nose treated with Antistine-Privine®. Section through ethmoid sinus (posterior block) showing complete necrosis.

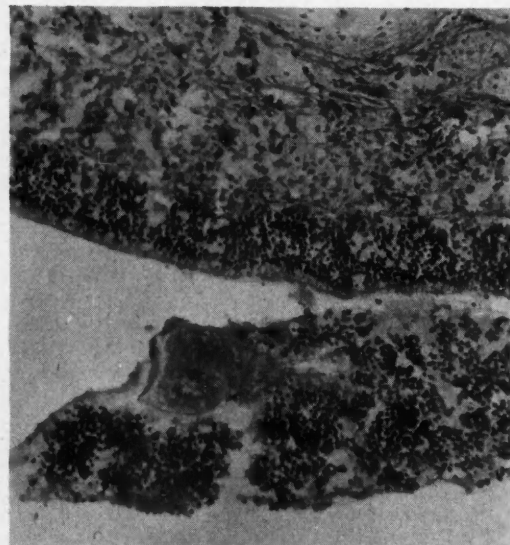


Figure 4.—Rabbit's nose treated with Allergan® for 14 days. Section through ethmoid sinus (middle block) showing congestion and small amount of pus.

Further experiments are being carried out to determine any residual damage from these three antihistaminic solutions in rabbits following a period of withdrawal of the drugs after similar courses of intranasal instillations.

In experimental animals, so far as histologic ob-

servations would indicate, Antistine-Privine was the most harmful and caused almost complete necrosis throughout the entire nasal area. The author has found this drug to be extremely irritating when employed as a topical application for symptomatic relief of nasal allergic disease.

TABLE 1.—*Histologic Observations of Nasal Mucosa of Rabbits Subjected to Nasal Instillations of Antihistaminic Drugs*

Series	Rabbit	Degree of Damage* Observed in Serial Sections					Sum of Injury (All Sites)
		Anterior	Mid-anterior	Middle	Mid-posterior	Posterior	
1. Antistine-Privine 3 times daily for 14 days	1	4	5	8	8	8	33
	2	2	3	8	8	8	29
	3	6	6	6	8	8	34
							96
2. Allergan 3 times daily for 14 days	4	2	2	5	4	5	18
	5	4	5	7	7	6	29
	6	2	5	6	7	7	27
							74
3. Allergan 2 times daily for 30 days	7	3	5	6	7	7	28
	8	2	3	6	6	6	23
	9	3	3	5	4	5	20
							71
4. Pyribenzamine 3 times daily for 14 days	10	2	3	5	5	5	20
	11	2	5	5	5	4	21
	12	5	3	3	0	6	17
							58
5. Controls (untreated)	13	1	0	0	3	3	7
	14	2	0	1	2	3	8
	15	1	1	1	2	3	8
							23

*Numerical equivalents for degree of damage: Edema, 1; congestion, 2; round cell infiltration, 3; pus, 4; desquamation, 5; slight necrosis, 6; moderate necrosis, 7; complete necrosis, 8.

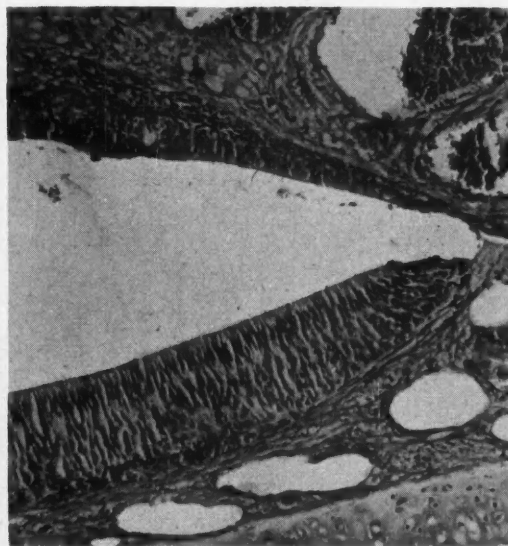


Figure 5.—Rabbit's nose treated with Allergan for 30 days. Section through vomeronasal organ (anterior block) showing congestion.

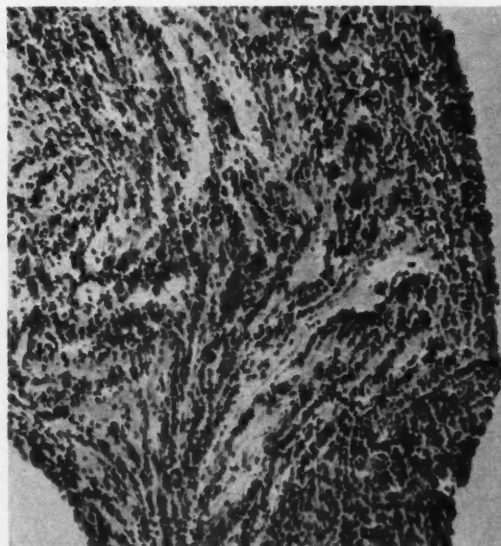


Figure 6.—Rabbit's nose treated with Allergan for 30 days. Section through maxillary sinus (posterior block) showing slight necrosis and desquamation.

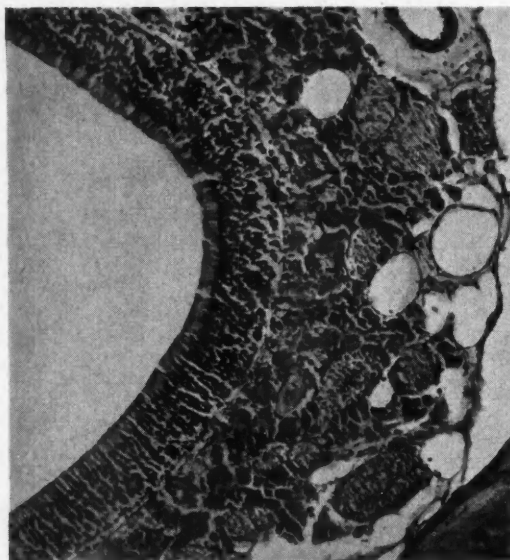


Figure 7.—Rabbit's nose treated with Pyribenzamine.⊗ Section through maxillary sinus (posterior block) showing slight necrosis and round cell infiltration.

Pyribenzamine, probably because of its use alone—that is, without any vasoconstrictive agent—was the least harmful in the animals. It has been observed to cause considerable pain and discomfort in patients and to be the least effective for relief of congestion since it contains no vasoconstrictive agent.

Allergan caused more damage than did Pyribenzamine in the nasal mucosa of rabbits, but considerably less than Antistine-Privine. So far as amount of injury in the animals was concerned, there seemed little choice between the use of Allergan three times a day for 14 days and its use twice a day for 30 days. Allergan has not been observed by the author to be irritating to any degree in patients with nasal allergic disease unaccompanied by acute infection, and it has been noted to be the least irritating of these three antihistaminic solutions in nasal allergic disease complicated by infection. The author has used Allergan for simple nasal instillation, for administration by the aerosol method, and, in half strength solution with normal saline solution, for the Proetz displacement procedure.

All antihistaminics are, of course, contraindicated for the occasional patient who proves to be sensitive to such drugs.

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Penicillin as an Etiologic Factor in Ectopic Pregnancy

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SUMMARY

Among patients observed in private practice the incidence of ectopic pregnancy trebled after the advent of penicillin therapy in the treatment of chronic pelvic inflammatory disease. In seven of eleven cases of ectopic pregnancy in a two-year period, the patients had had penicillin therapy previously. A probable explanation is that in cases in which the fallopian tube is closed by inflammation, it reopens following penicillin therapy but, because of residual damage, the ovum may not descend to the uterine cavity and is impregnated in the tube.

IT is well known that any factor which will delay or prevent the passage of a fertilized egg into the uterine cavity may result in tubal pregnancy.² The normal tube is a highly variable, contractile organ lined with ciliated epithelium and not simply a canal which is either open or closed. The most common condition which alters tubal function is chronic inflammatory disease, notably that of gonorrheal origin, although postabortal and puerperal infections may likewise be concerned.² The role played by inflammatory disease is most apt to be a mechanical one, through narrowing or obliteration of the lumen, or through production of blind alleys as a result of agglutination of adjacent tubal folds. Peritubal inflammation with angulation or constriction produced by adhesions is another factor which may disturb normal tubal function. Aside from the purely mechanical role which inflammation may play, it may be responsible for pronounced impairment of ciliary activity and muscular peristaltic activity, with resulting retardation of the progress of the fertilized egg along a damaged but patent tube.

The clinical course of patients with infections of the female pelvis has radically changed since the advent of antibiotics, particularly penicillin. In most cases, acute salpingitis and acute postabortal infections, if treated early with penicillin, cause little or no residual damage. Thus, the incidence of sterility following these infections has been reduced considerably. The use of penicillin has also yielded very gratifying results in chronic infections of the pelvis. Several years ago the author reported results in the treatment of a series of patients with chronic endocervicitis with the intramuscular use of penicillin in oil and beeswax and later the more

refined penicillin in oil.¹ The results were remarkable; 94.5 per cent of patients had definite improvement. More recently the response to this treatment, while still good, has not been as dramatic. It is believed that this is because penicillin-resistant strains are developing in many patients as a result of widespread use of the drug. Since chronic endocervicitis is the most common cause of sterility³ in the female it naturally follows that many patients who are infertile might become pregnant as the result of this therapy (in the author's series, 51 per cent). It is also well known that many patients with chronic cervicitis also have associated chronic parametritis and salpingo-oophoritis, which in many instances respond to some extent to the penicillin therapy. In some cases in which the tubes were closed before penicillin therapy, tubal patency was observed after treatment with the drug. Simultaneously with these observations on the effects of penicillin, the author became aware of an increasing number of cases of ectopic pregnancy among the patients observed.

As was previously mentioned, residual damage to the tubal epithelium with impairment of ciliary activity or changes in the muscularis or serosal surface of the tube may interfere with peristaltic activity, retard the progress of a fertilized egg, and lead to ectopic pregnancy. It is conceivable that improvement following penicillin therapy may result in reopening a non-patent tube while considerable residual damage remains. In such circumstances it would be possible for a sperm to traverse the length of the tube on its own power and fertilize an egg which had not descended to the uterine cavity because normal tubal peristalsis and ciliary action were lacking. With these facts in mind, the cases of ectopic pregnancy which were observed during the years 1949 and 1950 were studied.

Eleven cases of ectopic pregnancy were observed in private practice in that period. Seven of the patients had had penicillin therapy prior to the development of the ectopic pregnancy. During the two years in which the 11 cases of ectopic pregnancy occurred, 750 patients with intra-uterine pregnancy were treated. Thus the ratio of ectopic to intra-uterine pregnancy was 1:68. In reviewing two years (1940 and 1941) prior to the advent of penicillin, it was noted that there were only two cases of ectopic pregnancy as compared with 415 intra-uterine pregnancies, or a ratio of 1:207. This more closely approaches the incidence of 1:300 reported by Schumann⁴ in 1921. In checking records of ectopic pregnancy in which operation was done by other members of the staff of the hospital used by the author, it was noted that there were four additional cases in which the patient had received penicillin therapy prior to the development of the

Chairman's address, presented before the Section on Obstetrics and Gynecology at the 80th Annual Session of the California Medical Association, Los Angeles, May 13-16, 1951.

TABLE 1.—Data on Patients with Ectopic Pregnancy

Case No.	Age	Para	Gravida	Duration of Sterility	Period Between Last Penicillin and Ectopic Pregnancy	Associated Pathologic Conditions
1.	30	I	I	3½ years	7 weeks	Bilateral salpingo-oophoritis
2.	31	I	I	5 years	5 weeks	Bilateral salpingo-oophoritis
3.	38	I	II	9 months	12 weeks	Bilateral salpingo-oophoritis
4.	33	0	I	12 years	23 months	Postabortal parametritis and salpingitis
5.	26	I	I	?	3 weeks	Parametritis
6.	27	0	0	6 years	3 years	Parametritis and bilateral salpingitis
7.	18	0	0	8½ months	2 months	Bilateral salpingitis
8.	26	0	I	9 years	9 months	Bilateral salpingo-oophoritis and syphilis under treatment
9.	27	0	II	10 years	6 months	Right salpingo-oophoritis and arrested syphilis
10.	34	I	III	?	4 months	Left salpingo-oophoritis
11.	34	0	I	?	3 months	Bilateral salpingitis

Note: In cases 1 to 7 inclusive, operation was done by the author; in cases 8 to 11 inclusive, by other staff members in same hospital.

ectopic pregnancy and in which penicillin might have been an etiologic factor. During the two years 1940 and 1941, there were 25 patients with ectopic pregnancy operated upon at the Cedars of Lebanon Hospital, as compared with 36 in 1949 and 1950. It is interesting to note that the incidence of spontaneous abortion in patients observed in private practice was little changed. In the years 1940 and 1941 approximately one in nine pregnancies ended in spontaneous abortion, whereas during 1949 and 1950 the incidence was approximately one in ten.

DISCUSSION

In considering the overall picture, the author believes that the advantages of penicillin therapy in pelvic inflammatory disease considerably outweigh the disadvantages. The number of undesirable penicillin reactions has been greatly reduced with the refinements of the present-day preparations. The number of patients who have been spared oper-

ation or invalidism by penicillin therapy is gratifying. Many women who might never have conceived without the benefits of penicillin now have children. The incidence of sterility following acute salpingitis, postabortal and puerperal infections is much lower now than it was in the era before antibiotics. However, the results of the present investigation should caution physicians to be on the alert for ectopic pregnancy in patients with pelvic inflammatory disease who have received penicillin for any reason.

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Some Viewpoints on Child Psychiatry

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SUMMARY

There is a great tendency in recent years to seek psychiatric answers to well-nigh all kinds of child problems. This tendency is seriously questioned. The average child has splendid capacities to solve his own growth problems, within the limits of home, school, neighborhood. Evidence accumulates that the average parent who seeks counsel has done a rather respectable job; that in his fear of setting limits because of "how the child will feel," there is more of psychological threat to the child than in daring to comfortably move ahead and make some mistakes.

Psychiatric treatment of a child implies that the child is unable to meet situations as adequately as other children. Such treatment should be reserved, in the main, for use in situations in which the psychiatrist and parents are willing to underwrite the implications of treatment. Treatment aimed at the vague goal of making the child "happier" is dubious. Treatment by a psychiatrist is presumably medical treatment and carries with it the advantages and disadvantages inherent in this fact. When given without carefully defining the reasons for it and the goals at which it is aimed, within medical framework, it is potentially an undesirable procedure.

THERE are no widely accepted criteria of results in child psychiatry. This is inevitable in the complex field of human behavior, where knowledge is scanty and probably superficial. It is also inevitable because there are no clearly agreed purposes or objectives, except in most general terms. Yet we go on working with children's problems, and in so doing we indicate we think it is worthwhile. We must ask questions, appraise, check. If we regard child psychiatry as a part of medicine we have to apply medical criteria.

First of all I want to state that the average American child, as I see him in clinic or office, is a rather competent young organism. He has many problems: those of eating, dressing, going to school, getting on with siblings or peers; he has the problems of feelings, attitudes, relationships. In a sense these problems are his "needs"—are the circumstances of his physical and personal environment that demand his problem-solving attention. But I no longer leap to

the conclusion that he must be taken on a psychiatrically conducted tour through this maze, lest he be lost or overwhelmed. He has a considerable capacity to digest these need situations that confront him; in so doing he creates the physical-personality structure that moves him on to the next series of problem-solving demands. None of us knows just what this is; call it "growth," or "Nature." The point is: The child ordinarily does what is demanded by the situation.

And right here is where I discovered that "need" is a term unwittingly calculated to call out the big-brother, protective attitudes in the well-intentioned adult. America cares for its "needy"; children appear to shower us with their "needs." Or do they? Perhaps it is not so much their insistence on our meeting their needs as it is a case of our meeting our own needs in the well-known projective mechanism of finding the need in someone else. "Meeting children's needs" sounds so splendid; it affords exceedingly interesting values to the need-meeter. I failed completely, for years, to see the dangers implicit in the concept.

What is the nature of these dangers? Well, it easily leads to odious "understanding" spelled with capitals. It easily leads to depreciation and derogation of children; it easily leads to the actuality of acting toward the child as if he were unable to solve his problems. To question the concept can easily lead to the accusation of being callous to the feelings of children. The more I ponder it the more I realize how subtly it deflects thinking.

There are undesirable parents; I have seen some of them. They are not as numerous as I formerly thought. In the area of complete voluntariness (to which area I am confining myself) it is probable that most parents who seriously consult the psychiatrist are, by so doing, testifying to being somewhat concerned. Such a parent is very often troubled by the matter of his emotional value to his child. He feels that what he has done or not done is wrong—that much of the symptom is an evolution from ill-doing by him, the parent.

In my earlier days I routinely tended to agree with the parent; after all, he diagnosed not only the nature but the "cause" of the difficulty. The physician, like other people, desires pegs and pigeon-holes. Furthermore, the statements made by the parent fell in with the physician's "need" to see his patient as the product of forces operating "on" him. He had learned it is not proper to be critical of a person with symptoms; the child had symptoms. I as a physician followed this course; I found that my confreres did likewise. Eventually it began to dawn on some of us that we were "blaming," just as much as if we had been critical of the child; we

simply hadn't been taught to be equally chary of criticism of someone else unless we were likewise cognizant of the implications of this criticism.

So I listened to, and honestly expressed, such clichés as, "There are no problem children, only problem parents"; "No child a psychiatric case except by reason of maladjusted parents," and others ad voluminem. Out of all this I imbibed the concepts of childhood "insecurity," "feelings of rejection," etc. I achieved greater "security" for myself by showing to the parent the unwisdom of what he had done. Kindly realize I am not meaning to indicate I forthwith crudely struck at the parent with open hostility. It was far more subtle than that; it was an attitude. And then some of us began to sense that these terms are very high orders of abstraction. They perhaps denominate feelings that exist, but who can define them, who measure them, who say with certainty that a normal child should have no "insecurity"?

The questions that flood over one when he tries to give "security" and "rejection" local habitation and description, are numerous and disquieting. These are terms applying to complex intangibles; they are charged with psychological dynamite; they are bandied about by psychiatrists and ancillary workers as though they had verifiable solidity. Try pinning each of ten mental hygienists down to criteria of such terms that are usable by each of the other nine. (The answers I have obtained condense to: "Well, I have a clear idea of what I mean by the term.")

To return to the parent consulting me: He knows how he feels—that he is anxious—but he does not know what I do concerning the underlying psychologic or pathologic condition. For unless I know more of this than he does, he is wasting time, effort and money with me. Patients have symptoms; physicians make diagnoses. The parent informs the psychiatrist of the multiplicity of destructive results he has "caused"—unhappiness, nervousness, insecurity. Whether these be facts upon which I stand depends on what I evaluate. There is no escape from this. To be sure, these feelings are real to the parent and as such we accept them; that is very different from the fact of my appraisal of his recital—of my diagnosis.

As I listen to the parent, I begin to ask myself, "Is the child who is being described incompetent or ill?"; "Does the child need medical treatment?" I try to function as a physician taking down the facts, including feelings, as they are presented by the one stating the problem. I ask questions and I carry out procedures that I have evolved, in my attempts to make sense out of the case before me.

I try something of the same kind with the child himself, when I see him. I try to clinically "cross-section" the child at the levels designated—physique, nervous system, intellect, character, capacity to relate, etc. Sometimes I need accessory studies. I try to keep in mind clearly: What manner of child is this before me? How well can he perform? How

closely does he approximate others of his age and status in over-all adequacy? Through the years the physician learns some techniques of helpful appraisal on feelings and life experiences. All this is most important but not germane here. What I regard as germane here is: What are the reasonable goalposts on which the physician may focus his sights? What goals are medically sensible and attainable? And what goals reside predominantly in the feelings of the psychiatrist?

Through such searchings I came to realize that medicine, and psychiatry as a branch thereof, have very inept measuring rods as to the underlying feelings of the child. The evidence for this statement lies in the vast variety of interpretations of feelings as portrayed in books, journals, and by speakers. Such measuring rods simply do not exist in the sense of widely accepted, uniform standards. An examiner can declare a child is "rejected" or "unhappy." But if a listener chooses to challenge for the evidence, usually nothing but argument or chaos ensues.

Constantly I note that psychiatrists and their ancillaries make statements such as, "I feel such and such is the situation with John." Now, the concept "I feel" is very good for certain areas; I have doubts of it as a valid scientific instrument. It is a term of so-called infinite value. If I feel that you are insecure, all either of us knows for sure is that I feel you are insecure. Yet our records are abundant with this kind of statement—statements that appear to be full of significance, and that often result in significant management for the patient. And yet the statements are inherently devoid of meaningfulness about the patient; they are full of meaningfulness about the examiner. There is no way for my feeling to measure your emotional status.

But medicine, and psychiatry as a branch of medicine, do have widely accepted measuring rods for competency, or performance. I do not refer primarily to the intelligence quotient. There are physical and neurological examinations, x-ray examination, psychological tests, school appraisals, etc. Above all, there is the day-by-day performance of the individual in question. What a person does can be seen and measured with an approximation of objectivity; how a person feels is fluid, elusive, not directly observable or get-at-able.

When I explore in this manner I begin to think: If this is true, then it must be something approaching "normal." I do not know what normal is; but I have blueprints I use in everyday work against which I can project the particular case, just as other physicians have blueprints of normal hearts against which they mentally project the particular heart. Viewed against this blueprint, the child's behavior now appears different from what it formerly did. Once it was routinely viewed as psychiatric, which means medical, which means needing treatment, which means needing my assistance, which means something rather close to the situation's being my problem instead of his.

If this is the planned sequence of thinking-acting, well and good; I found it was not what I had regularly meant to do. I had not wished to remove from the child's shoulders the problem in question, unless it was too large for him. I had wished to make him more aware of his problem and have him do something about it. And the line of action which I then assumed to be correct was such that he might justifiably think that I did not think he could do what was demanded of him. For if he needed me to lift his problem, then it was too big for him, and he was not stupid if he permitted me to lift it. I am superior to him in age, judgment, experience. Or so he is supposed to think.

I desired to help the child; that was a good motive. But in so doing I often denied him the right and capacity to help himself. As a trained examiner for competence, I can judge rather well what he can do. I cannot measure his feelings. These are his property. He retains title to this property. In my acting on that fact lies my strength. Why not permit him to manage his feelings? He will, anyway. In our assumption that he can, we create in him a framework of belief in his ability. If we do not think he can, and yet leave him in the situation, we undermine him and threaten him.

This, I have come to believe, is the cardinal sin we have committed as mental hygienists in our overzeal to meet children's needs: We have attempted thought and feeling control because we have feared the child was inadequate; we have created some of the very ills we have sought to avoid. Our motives have been good, but have been based on assumptions that the child was not as equal to his task as we to ours. I now believe he is—that is, that the average child is; I am not speaking of that fraction that is inadequate. Now my job becomes, first of all, determining what are his capacities; I have much less anxiety about his not doing what children have always done. His feelings threaten me less, in accord with a rather widely accepted psychiatric dictum: As I accept the other fellow's feelings without fear or hostility, he finds that he too can accept them better.

I deprecate saying to a child with one side of the mouth that he must behave as we think he should; and then simultaneously telling him with the other side that we do not think he can. Such is confusing and even cruel. If I decide that he cannot do it alone and needs expert service, that is one thing. If I decide he can, then why buckle for him over-shoes that he can buckle? If the physician who examines the throat thinks the tonsils need attention, he works on them; if he thinks they are not at fault he does not hover around with anxiety intimating that they probably are at fault.

I now wonder why I didn't see this simple state of affairs long ago. I have discovered that many parents are rather promptly able to see it. To find an otherwise intelligent parent, who can in five minutes disgorge a tremendous mixture of medicine, psychiatry, psychoanalysis, discipline, religion, love, and common-sense, and then with a bit of pressure

on him to try thinking, can begin to find light in the fog, is somewhat pleasing. Parents are not nearly as stupid as I formerly thought; they often have swallowed indigestibles that we providers of the menu had not found wholly digestible ourselves—although I am not sure we were aware of that. It has been almost amazing to note how often such a parent can join into a fog-clarifying endeavor.

Now, I would not desire that a child not have available the services of a friendly doctor—if he needs them. But the questions to be answered first are these: "Does this child need a doctor?"; "Does he need treatment?"; "What are we treating him for?" If, after examining him, I think he needs my psychiatric services, I assume I shall so state. But that means I regard him as needing medical care. (And I no longer think that vague generalities about "making him happier," about "being a good father" to him, will suffice. If he has a good father, he doesn't need me; if he hasn't, my services are something other than a good father's.) The fact that his parents and I mean him well, will not suffice—we have the responsibility of deciding whether he needs a doctor. If we so decide, then the child is on sound logical ground if he regards himself as sick; and let no one say him nay, for that is what we have told him in terms so unmistakably obvious that no one but obfuscated adults could miss the point. We become entangled in the quicksands of our good intentions, which are sometimes more subtly entangling than bad intentions. This is of immense importance. Is it different from operating in acute appendicitis? If we operate, we indicate our medical conviction there is a diseased condition.

The regrettable fact is that we psychiatrists and our auxiliaries have been far from clear as to our function, our goal. As a result we have confused our roles with those of parents, teachers, ministers, recreationalists, and others. If our function is to "make him adjust" or "make him happier," I wonder wherein we as physicians have any special competence. "Happiness" and "adjustment," like "peace," are beautiful terms: We ought to be for them, and I have discovered we have been—in a rather large and uncertainly focused way.

Suppose we stick to the more traditional medical roles! Here someone will suggest "prevention." This term, too, has a ring of sanctity and science. Since any person we treat who does not immediately pass out of the picture can serve as testimony against how much worse he might have been had we not treated him, the fact seems to be we have very little unequivocal evidence on prevention. It sounds good; and those of us who have preached it have not done so maliciously. Sometimes I think our chagrin might be less if we had so done; we could have been unmasked by ourselves considerably easier. We have fallen prey to assumptions and fine motives. It is time to take stock!

Parenthetically, let me say that I have heard experienced psychiatrists suggest that when a teacher thinks a child needs psychiatric treatment, they

agree that he does. If teachers are adequate as diagnosticians in medicine, I agree. Most of the teachers I have known have been adequate—as teachers. But I know more than the teacher does about medical evaluation; it is not immodest to act as if I believed it; I decide if a child needs treatment. With parents much the same situation exists: They make assertions, after which, we hope, they check with their physician. The physician cannot escape the essential responsibility of the decision, and equivocations about letting the patient decide are illusory. Of course we will not force treatment on a voluntary patient—adult or child. But before we leave the decision to him, we have already decided whether we approve. If we do not think the patient should have an operation, his eagerness for one is not a valid basis for abdicating our medical criteria.

It seems to me to add up to something I might express as follows: The overt behavior of each person is always being checked by the forces outside of, or inside of, that person. Usually it is a combination of both, and we have come generally to regard the distinction between inside and outside world as more practical and artificial than natural. Overt behavior is thus always working within limits—limits or dividing lines that are either explicit or implicit. Non-overt behavior, on the other hand, is roughly synonymous with thought and feeling. Such phenomena are never subject to direct control by

either the inside or outside world. Thoughts and feelings cannot be ejected by a fiat of will, or authority. They must be accepted, and in their acceptance is often the key to practical control. In our acceptance of our troubling thoughts and feelings, we deprive them of some of their fearsomeness. As parents, teachers, physicians, come to more acceptance and less fear of the feelings of the child, the child gains in assurance as to his own ability to accept and, therefore, handle. His feelings are less threatening to me and consequently less threatening to him—whether I be his parent or his doctor. In the same way, some of the feelings of the parent threaten me less; I am not so troubled by his assumed rejecting attitudes. I have learned that even “good” parents probably have these attitudes at times; they do not frighten me into prescribing psychiatric treatment. As they frighten the parent less, they frighten the child less. I do not depreciate and derogate the child’s inherent ability as much as I formerly did. Whereas formerly I treated 75 per cent to 90 per cent of all children who were sent to me as needing psychiatric treatment, now I treat 25 per cent or less. Children solve problems, and one of their greatest “needs” is to have this fact recognized. I traveled many years and thousands of cases to learn what ought to be a simple truth. I mixed my motives with the child’s problems and often treated my motives.

14317 Huston Street.

"Glossopharyngeal Breathing" by Paralyzed Patients

A Preliminary Report

CLARENCE W. DAIL, M.D., Los Angeles

SUMMARY

Several patients with poliomyelitic paralysis of the muscles used in normal breathing learned a method of breathing consisting of pumping air into the lungs by action of the mouth, cheeks, tongue, pharynx and larynx.

The advantages of the method are that the patient can be out of the respirator and on a conventional bed for longer periods, can talk longer and louder, is more easily cared for, and is better able to engage in interesting occupations.

AN unusual kind of respiratory action is practiced by several patients at Rancho Los Amigos who have pronounced poliomyelitic impairment of the respiratory muscles and who, except by this

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kind of breathing, have a very low vital capacity and limited ability to breathe without artificial means.

Very similar to the lung breathing used by most amphibia including frogs and toads, it consists of trapping a small amount of air in the mouth and throat and then forcing it through the larynx by action of the tongue and pharynx and sometimes of the cheeks. The air is then held in the lungs by closure of the larynx while the mouth and pharynx are again filled with air, which again is forced into the lungs. This is repeated about a dozen times until the lungs are quite filled. The air in the lungs is then emptied, usually through the partly closed lips. This is repeated continuously with a respiratory rate of about six per minute. The terms "glossopharyngeal breathing" and "frog breathing" seem to be quite appropriate for brief description.

Several of the patients discovered this method of breathing without help or even suggestion that it was possible. Others learned from them. Several of the patients who breathe in this manner are able now to be out of the respirator for several hours.

TABLE 1.—Data on Glossopharyngeal Breathing (15 Patients)

Patient No.	Age, Sex	Onset of Paralysis	Date GPB* Started	Approximate Vital Capacity		Time Out of Respirator (As of June 1, 1950)		Remarks
				Without GPB	With GPB	Without GPB	With GPB	
1	29M	5-9-44	About '46	150	600	Not known	All day	Died 1-30-49
2	25F	8-10-49	10-12-50	100	1,000	25 min.	2 hrs.	
3	37F	6-25-48	9-21-50	200	815	25 min.	2 hrs.	Practicing only. Not yet learned.
4	29F	10-24-49	10-12-50	200	1,710	2 min.	3 hrs.	
5	28M	11-10-48	9-13-50	100	1,150	2 min.	1 hr.	
6	29M	11-7-50	2-15-50	10±	1,200	Not out	1½ min.	
7	21M	8-7-49	1950	1,500	2,700	†		
8	17M	10-10-48	April '49	500	1,500	†		
9	20M	8-29-48	May '50	600	1,600	†		
10	39F	11-15-48	9-22-50	100	300	1 min.	1 min.	
11	24M	9-3-50	2-13-50	200	.....	1 min.	1 min.
12	44M	10-10-49	10-27-50	0	.....	1 min.	1 min.
13	24F	5-29-50	11-14-50	150	.....	1 min.	1 min.
14	25M	9-17-48	10-3-50	0	.....	1 min.	1 min.
15	4 F	8-2-43	May '51	500	900	All day	Does most of breathing with neck muscles

*GPB=Glossopharyngeal breathing.

†Did not need to resort to glossopharyngeal breathing.

Additional comment: It is noteworthy that Patient No. 6 has very low vital capacity. Patients 7, 8 and 9 are able to "frog-breathe" successfully but do not need to. Patients 8 and 9 stated that at one time they were able to talk more loudly when they were using "frog breathing" than they could otherwise. Patients 10 to 14 had not learned the technique at the time of this report, although all had been practicing for some time. Patient No. 1, although he died, probably from chronic anoxia, mastered the technique of "frog breathing" and was able to remain out of the respirator during the daytime. Patient No. 15 does not need it for breathing unless it might be used as an alternative, since she breathes mostly with accessory muscles in the neck.

They can be placed on a regular bed, which facilitates nursing care, physical therapy and occupation, and improves their morale. They are able to talk much louder and longer on one breath, and they are better able to cough up mucus.

Nine ventilation measurements were done on four adult patients (Patients 2 to 5, Table 1) who used this form of breathing. The average amount of air forced into the lungs at each pumping action of the tongue and mouth was 58.7 cc. The average volume of a single breath was 713 cc. The average number of breaths per minute was 6.1 and the average volume of ventilation per minute was 3,761 cc.

This volume of ventilation was low in comparison with the average volume of 6,848 cc. per minute produced for these patients by the respirator operating at the rate and capacity to which the patients were accustomed (average tidal air of 428 cc. and average rate of 16 per minute). Some of the difference in volume—possibly 1,000 cc. of it—may be offset by the better quality of the air breathed by the glossopharyngeal method, since there is less

rebreathing of air in the dead air space with deep slow breathing than with shallow rapid breathing. It is possible also that there is better absorption of oxygen because of positive intrapulmonary pressure achieved in glossopharyngeal breathing.

Attempts at instruction have been almost entirely from patient to patient. Since many patients could receive great benefit, better means of instruction should be developed.

Adequate strength of the participating muscles, those of the larynx, pharynx, soft palate, tongue and cheeks and mouth, is of course necessary. Care should be taken that this method of breathing is not overdone in the presence of inadequacy. There should be no undue fatigue which may lead to anoxia. To permit time for practice, artificial respiration should be stopped several times daily, for not more than a minute at a time at first but for gradually extended periods as the patient improves in technique. The volume of ventilation per minute should be measured before the patient is able to breathe more than about ten minutes.

312 North Boyle Street.

CASE REPORTS

- ◀ Renal Hemangioma
- ◀ Aberrant Pancreatic Tissue in the Gastric Wall
- ◀ Rectal Hemorrhage Caused by Injection Slough

Renal Hemangioma

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RENAL hemangioma is a rare lesion which usually is not properly diagnosed until operation for removal of the affected kidney because of suspected carcinoma. Most such tumors are benign, as in the case here reported.

REPORT OF A CASE

A 48-year-old housewife entered the Huntington Memorial Hospital June 11, 1950. Gross hematuria had occurred a month previously and an abdominal tumor had been palpated in the region of the right kidney. Thyroidectomy for adenocarcinoma had been done three months before admission.

Upon physical examination it was noted that the right kidney was easily palpable and apparently enlarged. Results of routine examination of the urine and blood were within normal limits.

In a cystoscopic examination no abnormality was observed in the bladder and renal function was good bilaterally. What appeared to be a tumor involving the lower pole of the right kidney was noted in pyelographic studies.

At operation a firm, nodular, spherical tumor protruding from the lower pole of the right kidney was observed. The overlying fat and other tissues were not adherent to the lesion. One large vein extended into the tumor. Since primary or secondary carcinoma of the kidney was suspected, nephrectomy was carried out. Convalescence was uneventful and the patient left the hospital on the ninth postoperative day.

PATHOLOGIC REPORT

The specimen was an entire right kidney including the entire renal pelvis and a 4.5-cm. segment of ureter and a portion of renal vessels, an adherent tumor mass and a thick layer of perirenal fat having a combined weight of 378 gm. and measuring 17.5x7.3x5.8 cm. (Figure 1). The kidney and tumor mass together weighed 290 gm. The kidney was of normal size and the attached tumor mass was 7.5x5.5x5.3 cm. in its greatest dimensions. The layer of perirenal fat which surrounded almost all portions of the specimen, including the tumor mass, varied from 2 to 11 mm. in thickness. Easily dissected from the kidney and the tumor, it weighed 88 gm. On cut surfaces of the tumor were numerous large cavernous spaces varying from 2 to fully 16 mm. in diameter. Abundant amounts of purple-red blood oozed from them. A distinct fibrous capsule averaging 1 mm. in thickness was present in all portions. In some areas the capsule was greatly thinned and small dark purple-red nod-

ules varying from 2 to 7 mm. across were easily seen beneath the thin layer of pink-gray connective tissue constituting the capsule. The capsule of the mass was adherent to the parenchyma of the kidney, firmly in some places and loosely in others. There was pronounced thinning of the parenchyma of the lower pole, apparently caused by pressure from the mass, so that the capsule lay adjacent to the inferior major calyx over an area 1.3 cm. across. Elsewhere the renal parenchyma was pale tan with fairly good cortical-medullary differentiation. The capsule was stripped with ease. The renal pelvis and calyces appeared to be essentially normal. No abnormality was noted in the segment of ureter, and there were no thrombi or emboli in the renal arteries and veins. Only a few vessels were observed in the capsule of the tumor, and no abnormality was noted in them. There was no major vascular trunk entering the mass from the extrarenal side.

In microscopic examination of sections of the tumor, the capsule was observed to be very thick. Portions of the capsule were dense and hyaline. In one area there was ossification, and spicules of bone with fatty marrow formation were noted. A broad band of connective tissue separated the tumor from the adjacent renal parenchyma. In all of several sections that were examined there were large numbers of vascular spaces, many of them one to several millimeters across while others were smaller. In some areas groups of capillary-sized channels were present. Many of the vascular channels were widely distended with blood. In some of them there was a layer of thin endothelial cells but in others the cells were considerably swollen and contained vacuolated cytoplasm, apparently due to content of fat. The endothelial cells, in some places, somewhat resembled epithelium. Varying amounts of connective tissue were present in various parts of the growth, and in some areas broad strands of dense connective tissue were present. There were large numbers of hemosiderin-filled macrophages in most of the connective tissue, and in some areas many round cells were present. In other parts the stroma was rather fine and only thin strands separated the blood vessels. There was no evidence of malignant change. The structure of the parenchyma of the kidney was essentially normal, with only an occasional minute scar, chiefly under the capsule. In two sections taken specifically through the border of the tumor and the kidney, the capsule of the kidney was observed to be continuous over the tumor; the growth obviously arose from within the renal substance (Figure 2).

Diagnosis: Benign hemangioma of the kidney.

DISCUSSION

The incidence of renal hemangioma is not altogether clear. Riley and Swan,⁹ in 1941, reported a case and made note of 36 others in the literature. White and Braunstein,¹⁰ in 1946, reported a case and stated that there were reports of 42 cases

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Figure 1.—Right kidney with hemangioma and attached perirenal tissue.

in the literature. Lazarus and Marks,⁷ in an exhaustive report on the subject in 1947, noted reports of 70 cases in the literature. Butt and Perry,² in 1951, on the other hand, placed the number of cases in the literature at 55.

Thus, while the exact number of reported cases is moot, the condition is patently rare. This is further borne out in the fact that the lesion was not observed in 13,219 necropsies at Boston City Hospital⁸ and only one such tumor was noted in 30,000 necropsies in the department of pathology at the University of Minnesota.¹

Some of the confusion can be attributed to the variety of terms used to describe renal vascular tumors. They have been called nevi, varices, telangiectases, angiomas, and capillary, plexiform and cavernous hemangiomas. Lazarus and Marks⁷ expressed the opinion that the terms designate various stages of a single variety of benign vascular tumor. Jacobs and Rosenberg⁶ described renal telangiectases, or hemangioma simplex, as vascular enlargement resulting from dilation to distinguish it from angioma, which is angioblastic in origin and has neoplastic tendencies.

Lazarus and Marks noted in reviewing the literature that 57.7 per cent of the patients were males. The youngest patient was four days old, the eldest 66 years. In 85 per cent of cases, the presence of the lesion became manifest before the age of 40. The incidence was about equally divided between the right kidney and the left. Hematuria was the primary symptom in over 95 per cent of cases. In the reported cases symptoms had been present for from one day to 36 years.

The diagnosis of hemangioma is seldom made preoperatively. There are no characteristic deformities observable in pyelograms. Gross hematuria from one kidney without other

demonstrable cause, with little or no pyelographic evidence of deformity, should always suggest the possibility of renal hemangioma, particularly if the patient is under 40 years of age.

The treatment in all but one of the reported cases of true

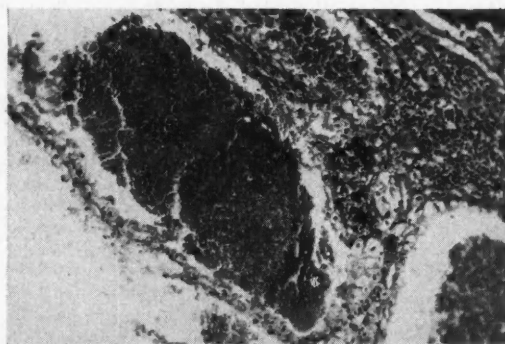


Figure 2.—Low-power photomicrograph of portion of hemangioma. Note the large vascular spaces and dense strands of connective tissue infiltrated by round cells and hemosiderin-filled macrophages.

renal hemangioma was nephrectomy. Hamm⁹ did partial nephrectomy in one case. The fact that only one possible case of bilateral renal hemangioma has been reported⁸ gives some assurance on a statistical basis, that the other kidney probably is not involved.

SUMMARY

A case of large, encapsulated renal hemangioma is reported. This is a rare condition which usually is first manifested by hematuria, most often in persons under 40 years of age. Carcinoma of the kidney is the most common preoperative diagnosis and nephrectomy the treatment.

112 North Madison Avenue.

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Aberrant Pancreatic Tissue in the Gastric Wall

LEWIS G. JACOBS, M.D., THOMAS E. RICHMOND, M.D., and JAMES M. TUCKER, M.D.,* *Oakland*

ABBERRANT pancreatic tissue has been observed in all portions of the gastrointestinal tract and in adjacent structures.^{1,2,3} As this ectopic growth is fairly common, it may be suspected in the presence of certain symptoms that cannot be precisely attributed to other pathologic processes in the abdomen. Excellent surveys of the literature have been made by Faust and Mudgett,² Barbosa, Dockerty and Waugh,¹ and Busard and Walters.³

The review by Busard and Walters summarized 543 cases of ectopic growth of pancreatic tissue. These, plus the case here reported, are summarized in Table 1. The gastric wall

TABLE 1.—Sites of Growth of Aberrant Pancreatic Tissue in 544 Cases

Location	Number	Per Cent
Wall of stomach.....	150	27
Wall of duodenum.....	159	29
Wall of jejunum.....	85	16
Wall of ileum.....	32	6
In Meckel's diverticulum.....	30	6
Wall of gallbladder.....	15	3
Miscellaneous locations.....	73	13
Total.....	544	100

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*Dr. Tucker died February 18, 1951.

is the site of about a quarter, the duodenal wall of another quarter, the jejunal wall of a sixth, and other locations (including 6 per cent in Meckel's diverticula) of a third. While the usual location is submucosal, involvement of the muscularis is common and of the mucosa not rare. The gross lesion is generally a polyp, either sessile or pedunculated, over which there may be a mucosal ulceration. The lesion may be asymptomatic; or it may cause symptoms of peptic ulcer, of hypoglycemia or of neoplastic disease.

The asymptomatic group is undoubtedly the largest. In many of the reported cases (and no doubt in many not reported) the condition was observed at necropsy as an incidental and unimportant finding. In various autopsy series, the incidence has averaged a little under 2 per cent. In Veterans Administration Hospital, Oakland, only one case (doubtful), other than the one here reported, was observed in 781 routine autopsies. The series reported by Barbosa and co-workers, the largest single group, consisted of 82 patients who were operated upon. In only 39 cases was there believed to be a causal relation between the aberrant pancreatic tissue and the symptoms of which the patient complained. Thus, in 43 of 82 cases in which the condition existed, it caused no symptoms—this in a series of surgical, not autopsy, cases. Of course, when asymptomatic, this condition is unimportant except insofar as it may lead to later complications; and diagnosis could only be reached through some fortuitous circumstance.

Cases in which the aberrant tissue causes an ulcer-like syndrome are perhaps the most perplexing and difficult to deal with from a clinical standpoint, since the symptoms so closely mimic those of peptic ulcer, even to the presence of severe bleeding. In x-ray examination, the secondary signs of duodenal ulcer—spasm, irritability and tenderness of the cap, but without a visible crater—may be observed. In some instances actual mucosal ulceration over the tumor may be present, as has been noted both in operative and in post-mortem specimens. More often there is no ulceration. In cases in which the tumor can be observed in gastrointestinal x-ray films the problem is not so difficult of solution, but the tumor is by no means invariably demonstrated. Gastroscopy is not usually helpful, since if the tumor is sessile with intact mucosa it cannot be visualized by gastroscopy, and of course a duodenal tumor is beyond the range of this method. The radiographic appearance is not at all characteristic, since any benign tumor may have the same appearance on a film. In any case in which the symptoms of ulcer are present and there is x-ray evidence of polypoid or sessile tumor in the distal stomach or in the duodenum, with normal mucosa over it and sharp demarcation of the edges, the possibility that the tumor is a pancreatic rest should always be considered.

In cases in which the aberrant growth causes hypoglycemia, an adenoma or adenocarcinoma composed of functioning islet cells leads to hyperinsulinism with the usual clinical symptoms, of which convulsive seizures or episodes of syncope are the most striking. In such cases excision of the tumor is mandatory, and if metastatic lesions are present they should also be removed if at all possible. Tumors of this type are malignant in almost 50 per cent of cases, and later metastasis or recurrence usually causes recurrence of hypoglycemia. It is sometimes very difficult to locate the primary nodule either radiographically or surgically, as it may be anywhere in the abdomen.

Cases in which the tumor is of itself the important factor in the production of symptoms may be divided into two rather distinct subgroups—those in which the growth is malignant, and those in which it is benign. If it is malignant (probably the result of degeneration of an originally benign rest) the symptoms are those of obscure intra-

abdominal malignant disease; and except that jaundice is not often present, the course is that of pancreatic carcinoma. Although surgical excision is curative if complete, the absence of early symptoms makes it uncommon for the diagnosis to be reached in time. In cases in which the tumor is benign, its presence may be made evident by an episode of obstruction. Rarely are tumors of this order suspected on the basis of roentgenograms. The obstruction may be either partial (as with a tumor encircling the duodenum, the so-called annular pancreas) or complete (as with intussusception). The event may occur either in childhood or in adult life, but in most reported cases of pancreatic rests in children the lesion was discovered as a result of acute intussusception. In any case, the treatment is excision of the rest, with such other procedure as may be indicated.

In the following case, the symptoms were typical of those in which aberrant pancreatic tissue causes symptoms akin to those of ulcer. Although an x-ray diagnosis of duodenal ulcer plus gastric tumor was made, duodenal ulcer was not observed at operation.

REPORT OF A CASE

A 38-year-old fireman had occasional burning pain and heartburn extending up into the throat. These symptoms were first noted about 12 years previously. They occurred possibly two or three times a week up to the time the patient entered the Army. The distress was almost entirely sub-sternal and was usually aggravated by taking coffee, greasy and fried foods, apples and fruit juices. Alka-Seltzer® and bicarbonate of soda almost always gave relief. Usually the distress began about two hours after breakfast, continued through the day, became worse about two hours after the

evening meal and continued to become worse until bedtime. Rarely did gastric distress awaken the patient during the night and usually by morning it had abated. Food and milk practically never gave relief, although during the preceding few months on two or three occasions when the patient felt hungry and had some distress in the epigastrium, eating had helped. Bending forward and heavy work were liable to cause heartburn and distress with a bitter or sour taste in the mouth. There was no history of dysphagia, or of nausea or vomiting. The patient said he believed he had not lost weight. Appetite was moderate and no change in it had been noted. There was no history of icterus, melena, hematemesis, acholic stools or dark urine. After the patient was discharged from the Army (some five years before the present examination) epigastric distress was almost continuous. Chronically constipated for about 12 years, the patient often passed hard, lumpy stools. There were no episodes of diarrhea, and blood in the stools had never been noted. On several occasions in the preceding two years the patient had had fleeting and not very severe stabbing or aching pain in the right lower quadrant of the abdomen. The patient was uncertain as to whether these episodes were related to either constipation or substernal distress.

Rhinitis, apparently due to allergic reaction, had been present for several years.

Physical Examination: The patient was well developed and well nourished. There was a mild degree of tenderness in the right lower quadrant of the abdomen on the right side of the midabdomen. No masses were felt and the spleen and liver were not enlarged. There was slight varicocele on the left. In roentgen studies of the gastrointestinal tract, a filling defect 1.5 cm. in diameter in the pyloric region was noted (Figure 1). This appeared to be caused by a gastric polyp. The duodenal bulb was deformed and irregular. The roentgen diagnosis, after three gastrointestinal studies, was polypoid tumor of stomach, and duodenal ulcer, probably active. No abnormalities were noted in the heart and lungs, in a cholecystogram or in barium enema studies. Results of urinalysis were within normal limits. The cell content and sedimentation rate of the blood were normal. Results of



Figure 1.—Preoperative roentgenogram showing polypoid prepyloric tumor and irritability of the cap.



Figure 2.—Postoperative roentgenogram. The irritability of the cap is somewhat increased.

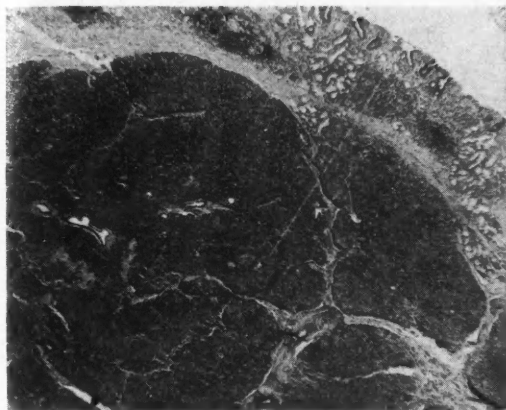


Figure 3.—Low-power photomicrograph of excised tumor.

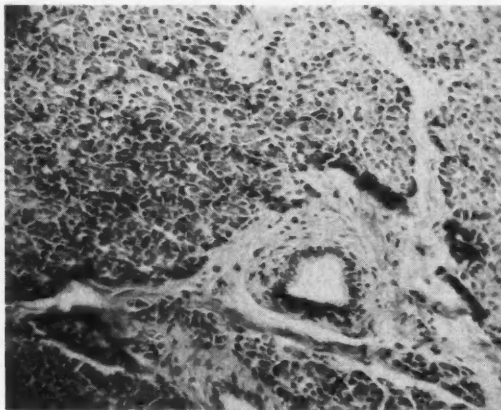


Figure 4.—High-power photomicrograph of excised tumor.

serologic tests were negative for syphilis. In gastric analysis a slight elevation of acidity, both free and total, was noted. The protein (agglutination) ratio was normal. There was a trace of blood in the stool (guaiac test).

The patient was observed in consultation in the allergy clinic and a desensitization program was begun. Gastroscopic examination was carried out on two occasions, but no tumor was visualized. In an exploratory laparotomy a polyp was noted in the lesser curvature in the prepyloric area. It was removed through an incision in the stomach. No evidence of duodenal ulcer was observed. Postoperatively the patient had a severe reaction to a blood transfusion. The pathologist reported the reaction as allergic since there was no evidence of agglutination or hemolysis. Postoperative treatment consisted of bed rest, administration of penicillin, and gradually progressive diet. No tumor tissue was visualized in postoperative x-ray films but there was evidence of continued irritation of the duodenal cap (Figure 2).

Pathologic Report: The specimen was a slightly polypoid mass of soft, rubbery connective tissue, partially covered by an intact, normal appearing mucous membrane. It was 1.2 cm. in length and from 0.6 to 1 cm. in diameter. In the central portion of the mucosa was a small pin-point umbilication. The sectioned surface was made up of a mass of soft, yellow tissue demarcated into small lobules of irregular fine strands of fibrous tissue.

Microscopically observed, the tissue was composed of an irregular, unencircled mass of adult pancreatic tissue embedded within gastric submucosa which was made up predominantly of the exocrine elements with a few scattered abortive islets of Langerhans. Well defined pancreatic ducts, some of them atrophic and others dilated and semicystic, were observed. The glandular lobules were surrounded by fine hyalized fibrous tissue trabeculae. The gastric mucosa was intact but focally thin and atrophic. There were a few chronic inflammatory cells scattered throughout the subepithelial connective tissue, and, focally, pancreatic ductal tissue extended upward into the mucosa itself (Figures 3, 4).

The pathologic diagnosis was aberrant pancreatic tissue in the gastric wall.

SUMMARY

A case in which a pancreatic rest in the stomach caused an ulcer-like syndrome is reported. A roentgen diagnosis of polypoid gastric tumor with secondary signs suggesting duodenal ulcer was surgically verified as regards the tumor

but not the ulcer. The case reported is typical of one of the four classifications of cases of aberrant pancreatic tissue. Certain other typical clinical syndromes are reviewed for comparison.

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Rectal Hemorrhage Caused by Injection Slough

A Report of Two Cases

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MANY clinicians have described the occurrence of bleeding as a complication of the injection treatment of hemorrhoids. There may be slight loss of blood at the time of injection, but serious hemorrhage is rare. When it occurs, it usually follows slough which causes erosion of a blood vessel. The rectum and rectosigmoid can retain a considerable amount of blood before the defecation reflex is stimulated, especially if the bleeding begins while the patient is asleep.

The following two cases are of interest because the character and the amount of the bleeding were more typical of polyp or neoplasm than of injection slough. They are presented to reemphasize the occurrence of severe bleeding as a complication of the injection treatment of hemorrhoids.

CASE 1. A 39-year-old white woman was observed in the office following the passage of a large amount of blood from the rectum. Most of the blood was in the form of dark clots, but some of it was bright red and uncoagulated. The patient said that for many years she had been treated for "spastic

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colitis" which was said to produce cramps and frequent attacks of diarrhea. The patient related the present hemorrhage to this disease. In 1941 hemorrhoidectomy was done in another city, and subsequently injections were given several times a year for "slight recurrences." The last injection was given by a physician in another city 12 days before the present hemorrhage.

On digital examination the soft firm edges of an ulcer were palpated in the right anterior area of the rectum. In proctoscopic examination it was noted that the rectum contained many clots, and some liquid blood. The clots were observed up to the 25 cm. level, and seemed to be coming from above. The bowel was cleansed by means of suction and cotton applicators, and in the right anterior, just above the mucocutaneous line, was an ulcer, 1 cm. in length, and about 7 mm. in width, apparently an injection slough. Moderate bleeding from the center of the lesion was easily controlled with light coagulation therapy. The patient was hospitalized for observation. In a barium enema and air contrast studies the colon appeared to be normal. No abnormalities were noted in x-ray studies of the stomach, esophagus, and duodenum. There was no further bleeding and the patient was discharged from the hospital after five days. The rectal ulcer healed in two weeks.

CASE 2. A 39-year-old white man, observed in the office, stated that he had passed a large amount of blood from the rectum during the night and had fainted. The blood, he said, was a mixture of clots and uncoagulated bright red liquid. The patient ascribed the hemorrhage to bleeding hemorrhoids which had started to bleed six months previously. Three injections of the hemorrhoids had been carried out by another physician. The last injection, three weeks previously, had been attended with severe pain which lasted for three days.

Upon digital examination, an indurated area with raised edges was palpated in the right anterior area of the rectum. In a proctoscopic examination many fairly large clots were observed in the rectum and rectosigmoid up to the 25 cm. level, and dark liquid blood was coming from above that level. After the bowel was cleansed by suction and swabbing

with cotton applicators, an ulcer 9 x 6 mm. was observed just to the right of the anterior mid-line and just above the mucocutaneous line. There was only slight bleeding from the center of the ulcer and it was easily controlled with pressure applied with a thrombin-dipped applicator.

A non-residue diet and a lubricant were prescribed and the patient was told to report any further bleeding. Upon examination three weeks later the ulcer was observed to be healed. In barium enema with air contrast studies carried out two months later, no evidence of polyp or other cause of bleeding from the large bowel was noted. When the patient was last observed there were moderate-sized internal hemorrhoids which seemed to be asymptomatic.

DISCUSSION

Attempts to determine the amount and the kind of solution used in the injection treatment in the two cases here reported were unsuccessful. Slough is usually caused by injecting the solution too superficially or by injecting too large an amount at one site. The pain attending the injection (Case 2) would indicate that the injection was given too close to the mucocutaneous line.

It is of interest that neither patient volunteered the information that an injection had been given and neither related the bleeding to the injection. In a case of moderately severe rectal bleeding, therefore, the patient should be questioned about having received injection therapy, and injection slough should be considered as a possible cause. The lesion is so near the anal canal that it can be missed in proctoscopy. It is not always palpable. There may be so much retrograde accumulation of blood that clots are observable up to and above the rectosigmoid level, thereby distracting the attention of the examiner from the mucocutaneous line.

SUMMARY

Two cases of moderately severe rectal hemorrhage caused by post-injection slough are reported. Neither patient related the bleeding to the injection. This condition should be considered as a possible cause, in cases of rectal hemorrhage, even though clots are observed higher in the bowel.

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California MEDICINE

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For Information on Preparation of Manuscript, See Advertising Page 2

EDITORIAL

C.M.A. Constitution and By-Laws

Printed in this issue are the new Constitution and By-Laws of the California Medical Association. These documents were voted into existence at the Annual Session in May 1951.

The new documents provide various changes in the method of election of members of the Council. They also bring out a new form of representation of the county medical societies in the House of Delegates and provide several organizational changes from the former documents.

The C.M.A. Council, under the new Constitution, will include Councilors of 11, rather than the former nine, Councilor Districts. The new Councilors will be elected by the delegates from their own districts, rather than by the House of Delegates as a whole, but the right of any District Councilor to serve may be challenged by any delegate in the House of Delegates. Councilors-at-large are elected as formerly, with not more than two of the six to be elected from any Councilor District.

In the House of Delegates, provision has been made for only elected delegates and their corresponding alternates to be officially seated. Each county society will hereafter be represented by a minimum of two delegates; the former Constitution placed the minimum at one.

Another important change from the old Constitution and By-Laws lies in the provision for holding two meetings of the House of Delegates each year. Under this provision plans have already been made for the interim session of the House of Delegates to meet in San Francisco on December 1 and 2, 1951. This will be the initial session of this type and it is expected that the business of the Association and of California Physicians' Service will be greatly expedited by the additional time available for consideration of the problems coming before the House.

All members of the Association are urged to read these new articles and to keep them for future ref-

erence. They establish the method under which the Association is formed and operated, and every member should gain for himself a full understanding of their provisions.

In contemplating the new Constitution and By-Laws it is easy to forget the tremendous amount of time and work which has gone into their making. When the interests of close to 11,000 members and 39 county medical societies must be considered, when the various geographical and population factors are given adequate weight, it is apparent that the drafting of official governing documents is no easy task. Two committees of the House of Delegates labored for two years to produce the draft of the present regulations, and then a period of one year elapsed before they were brought up for vote. Even then, several amendments were incorporated in the new By-Laws after the basic rules had been approved by the House of Delegates.

Now lying on the table, awaiting consideration at the 1952 Annual Session, are several proposed amendments to the Constitution. This is evidence of the fact that not all members of the Association were completely happy with the documents adopted this year. The views of such members will be given full consideration in next year's meeting.

The new Constitution and By-Laws supplant earlier documents adopted in 1935 and amended in many particulars since that time. The new articles are designed to eliminate faulty and cumbersome provisions in the earlier version and to bring the governing articles of the Association in line with current needs and conditions.

Every member of the California Medical Association has a direct stake in the provisions of the new articles, both as to their effect on himself and on his own county medical society. The pages carrying these provisions should be studied by all.

CALIFORNIA MEDICAL ASSOCIATION

H. GORDON MACLEAN, M.D.....	President	SIDNEY J. SHIPMAN, M.D.....	Council Chairman
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NOTICES AND REPORTS

Council Meeting Minutes

Tentative Draft: Minutes of the 384th Meeting of the Council of the California Medical Association, San Francisco, June 24, 1951.

The meeting was called to order by Chairman Shipman in Room 210 of the St. Francis Hotel, San Francisco, at 9:30 a.m., Sunday, June 24, 1951.

Roll Call:

Present were President MacLean, President-Elect Alesen, Vice-Speaker Randel, Councilors Shipman, Ball, Loos, Sampson, Morrison, Dau, Ray, Lum, Green, Pollock, Frees, Thompson, Bailey, Varden, Heron, Montgomery, and Secretary Daniels. Absent for cause: Speaker Charnock, Councilor West and Editor Wilbur.

Present by invitation were Executive Secretary Hunton, Legal Counsel Hassard, Assistant Executive Secretary Thomas, Legislative Chairman Dr. Dwight H. Murray, Dr. Francis T. Hodges and Mr. William Bowman of C.P.S., county society executive secretaries Glenn Gillette of Fresno, William Tobitt of Orange, Robert L. Wood of San Mateo, Joseph Donovan of Santa Clara, Public Relations Counsel Clem Whitaker, Jr., and Ned Burman.

Present by invitation during parts of the meeting were Dr. Edwin L. Bruck and John B. Benediktson, D.D.S., of the California State Dental Association.

A quorum present and acting.

1. Minutes for Approval:

(a) On motion duly made and seconded in each instance, minutes of the Council meetings of May 12 to 16, inclusive, 1951, Nos. 379 to 383, inclusive, were approved.

(b) On motion duly made and seconded, minutes of the 226th meeting of the Executive Committee, held May 16, 1951, were approved.

2. Membership:

(a) A report of membership as of June 22, 1951, was received and ordered filed.

(b) On motion duly made and seconded, all members whose 1951 dues had been received since May 16, 1951, were voted reinstatement as active members.

(c) On motion duly made and seconded, Dr. J. Earl Gossard and Dr. Abram Lipkis of Los Angeles County were elected to Retired Membership.

(d) On motion duly made and seconded, six applicants were granted a reduction of dues because of illness or postgraduate study.

(e) On motion duly made and seconded in each instance, three applicants were elected to Associate Membership. These were: Gordon Meiklejohn, San Francisco County; Mary Clark and Ann Fox, Santa Clara County.

3. Financial:

A report of bank balances as of June 22, 1951, was received and ordered filed.

Dr. Lum, chairman of the Auditing Committee, reported on the committee's investigation into compensation paid to editors of state medical journals in other states and on motion duly made and seconded, it was voted to continue the Editor's salary at the present figure, with the understanding that future adjustments would be considered if the duties of the Editor became burdensome.

4. Merced County General Hospital:

Dr. Lum, as chairman of the Executive Committee, reported that he and Dr. MacLean, accompanied by Councilors Dau and Thompson and Mr. Hunton, had met with the Merced County Medical Society on June 21 and that the society had voted to approve the report and recommendations of the Executive Committee. The following day Drs. Lum and MacLean and Mr. Hunton met with the members of the Merced County Board of Supervisors, who also approved the report and recommendations.

On motion duly made and seconded, it was voted to discuss with representatives of the Association of

County Supervisors the basic policies involved in county hospital administration and to offer the co-operation of the Association in adjusting differences which might arise.

5. *California Physicians' Service:*

Mr. William M. Bowman, executive director of C.P.S., reported that all resolutions adopted at the 1951 House of Delegates of C.P.S. had been put into effect or were in such process. He reported a beneficiary membership of 976,146 on June 1, 1951, on which date there were 10,863 physician members.

Mr. Bowman also reported on the recent formation of the "California Doctors' Plan" under the sponsorship of the California Osteopathic Association. Mr. Bowman also stated that as of June 1, 1951, 52 per cent of the C.P.S. membership had been converted to the new contract and that by the end of the year or sooner a complete conversion will have been reached. Payments on the present fee schedule are now at the rate of 90 per cent and are expected to go to 100 per cent by the year-end.

Dr. Francis T. Hodges, representing the Board of Trustees, reported on the resolutions adopted by the 1951 C.P.S. House of Delegates, several of which require Council action. On motion duly made and seconded, it was voted to give to C.P.S. the opening day, or its equivalent, of the interim session of the House of Delegates, provided the morning sessions start at 8 a.m.

Resolution No. 3, referring to a C.P.S. Fee Schedule Committee, was approved by the Council and on motion duly made and seconded, it was voted to leave the payment of this committee's expenses to C.P.S.

On motion duly made and seconded, it was voted to approve the employment of investigators by C.P.S., to check on possible abuses in billings to the organization.

6. *State Department of Public Health:*

Dr. Wilton L. Halverson, State Director of Public Health, reported that a smog research bill introduced into the 1951 State Legislature had been defeated. He expressed the hope that the Association might cooperate with the universities and other organizations in establishing a thorough research into this problem. The chairman suggested that the Committee on Public Health and Public Agencies consider this problem.

Dr. Halverson also reported that his department was in agreement with the Santa Clara County Medical Society, which had agreed to cooperate in a pilot study of morbidity survey methods if certain safeguards are set up to insure the review of statistics at the local and statewide level prior to their general release. It was regularly moved, seconded and voted to approve the proposed Santa Clara County pilot study, on the basis that a physician in the area and another representing the northern part of the state be appointed to the Medical Advisory Committee of the study.

7. *Public Policy and Legislation:*

Dr. Dwight H. Murray, legislative chairman, reported that nearly all the measures sponsored by the Association in the legislative session ended June 23, 1951, had been adopted and that several had already been signed into law by the Governor. He gave a review of some of the important measures and thanked the doctors of the state for their cooperation in legislative matters. Mr. Hassard reported further on additional legislative items.

8. *Committee on Chronic Disease:*

Dr. Edwin L. Bruck, co-chairman of the Committee on Chronic Disease, reported on a conference called by Governor Warren for October 1951, on the Problems of the Aging. Dr. Bruck has been named chairman of the health division, one of ten divisions of the conference, and he requested that physicians from all parts of the state be selected to attend and participate in the conference. It was agreed that the Association urge such participation in the conference, Dr. Bruck to work out the details of delivering such requests.

9. *California State Dental Association:*

Dr. John B. Benediktson, president-elect of the California State Dental Association, addressed the Council on the subject of fluoridation of potable water supplies as an aid in decreasing the incidence of dental caries. He produced figures on surveys in various parts of the country, showing notable decreases in such conditions, and requested the approval of the Council on this procedure. On motion duly made and seconded, the Council voted to approve the fluoridation of potable water supplies on the basis outlined by Dr. Benediktson of about 1.5 parts fluoride per million.

10. *National Foundation for Infantile Paralysis:*

Dr. Alesen presented Mr. L. D. Belveal of the National Foundation for Infantile Paralysis, who discussed the question of professional fees for polio cases which are being aided by his organization. On motion duly made and seconded, it was voted to approve the policies enumerated by Mr. Belveal for professional fees in such cases, including the following four points:

1. No fee schedule should be developed—fees to be subject to discussion between physician and patient.

2. Physician should not bill a non-legal source but should look to the patient or his family for his fee.

3. No payment to be accepted by physician from a non-legal source. If the National Foundation or other agency wishes to reimburse the patient, that is a consideration between the two; the agency should not enter into negotiations concerning the fee or the treatment of the case.

4. To maintain the traditional physician-patient relationship and to preserve an atmosphere of confidence and cooperation, the patient should at all times be treated as a private patient.

11. *Public Relations:*

Mr. Clem Whitaker discussed the services of Whitaker & Baxter, pointing out that his firm was prepared to continue its present services, including distribution of its feature service, at the present fee of \$750 monthly, or provide a standby consultation service at a fee of \$500 monthly. After considerable discussion, portions of it in executive session, it was regularly moved, seconded and voted to continue the present services at the present fee.

12. *Advisory Planning Committee:*

Mr. Hunton reported on the public relations program prepared by the Advisory Planning Committee and previously approved in principle by the Council for execution under the supervision of the Executive Committee. After discussion, it was regularly moved, seconded and voted to reaffirm the approval of this program, under the direction of the Executive Committee, and to extend a vote of thanks to the members of the Advisory Planning Committee who are not employees of the Association but devote their time to this phase of the Association's activities.

On motion regularly made and seconded, it was voted that the field of political public relations would properly be considered the sphere of public relations counsel and that the field of physician-patient relationships under a "grass-roots" program be left in the hands of the Advisory Planning Committee.

13. *C.P.S. Study Committee:*

Dr. Lum, as chairman of the Executive Committee, proposed the membership of the C.P.S. Study Committee, as voted by the 1951 C.P.S. House of Delegates. After discussion, it was regularly moved, seconded and voted that this committee should be composed of: James B. Graeser, Oakland; Alson R. Kilgore, San Francisco; Dave F. Dozier, Sacramento; F. E. West, San Diego; Joseph M. de los Reyes, Los Angeles; Harold P. Tompkins, Los Angeles; Donald Carson, San Francisco; J. Gary Campbell, Santa Barbara; Henry A. Randel, Fresno; F. E. Clough, San Bernardino; and E. Vincent Askey, Los Angeles, chairman.

14. *1951 House of Delegates Resolutions:*

Discussion was held on the resolutions adopted by the 1951 House of Delegates, as follows:

Resolution No. 1, concerning x-ray and laboratory service—C.M.A. office instructed to send copies to parties named in resolution.

Resolution No. 2, concerning Armed Forces Day—requirements of resolution have already been met.

Resolution No. 3, concerning medical ethics—C.M.A. office instructed to advise the county medical societies.

Resolution No. 6, concerning survey methods—cognizance of procedures taken in accordance with the terms of the resolution.

Resolution No. 9, concerning Crippled Children's Program—referred to Committee on Public Health

and Public Agencies for discussion with authorities of the State Department of Education.

Resolution No. 10, concerning care of military personnel—referred to C.P.S. Study Committee.

Resolution No. 11, concerning the notarization of narcotics inventory forms—Federal Narcotics Bureau has already taken step advocated of eliminating notarization requirement.

Resolution No. 12, concerning income tax provisions for physicians—required resolution already presented to A.M.A. House of Delegates.

Resolution No. 14, concerning Crippled Children's Program—referred to Committee on Public Health and Public Agencies.

Resolution No. 16, concerning the collection of contributions for medical schools—ascertain the policies of the A.M.A. in this respect and refer to the Executive Committee.

Resolution No. 19, concerning a study of the field of psychology—committee to be named to go into such a study.

Resolution No. 20, concerning medical services in adoption proceedings—Secretary to take up subject with State Department of Social Welfare.

15. *Committee on Scientific Work:*

Dr. Daniels, chairman of the Committee on Scientific Work, reported on several communications received since the 1951 Annual Session and commented on the difficulties surrounding the programming and execution of the annual meeting.

16. *Cancer Commission:*

Dr. Daniels presented the request of a tumor board for interpretation of the question of tumor boards dealing with practitioners in other fields. On motion duly made and seconded, it was voted to follow the policy already adopted of leaving the determination of this question in the local community.

Dr. Lum presented a question from his district relative to a pathologist performing services for practitioners in other fields. It was regularly moved, seconded and voted to refer this inquiry to various decisions of the Judicial Council of the A.M.A.

17. *Legal Department:*

Mr. Hassard commented on several court cases now pending. He also presented his statement for a fee of \$5,000 to cover extraordinary work performed by his office in connection with the current legislative session. On motion duly made and seconded, this statement was approved for payment.

18. *Time and Place of Next Meeting:*

It was agreed that the next meeting of the Council should be held in Los Angeles on September 16, the date later being revised to September 23, 1951.

19. *Migratory Farm Workers:*

Dr. Dau reported that the Council of Churches of Christ of America was working on a program of medical services for migratory farm workers and it

was regularly moved, seconded and voted to refer this item to the Executive Committee for action when a concrete program is devised.

20. *Student Nurse Recruitment:*

On motion duly made and seconded, it was voted to appropriate \$2,500 to a fund being raised by the Association of California Hospitals, California State Nurses' Association and others to promote student nurse recruitment.

21. *Conference on Schools and Physicians:*

An invitation from the Bureau of Health Education of the American Medical Association for participation in a conference on schools and physicians was voted referred to the Committee on Health and Public Instruction.

22. *Use of Mailing List:*

On motion duly made and seconded, it was voted to authorize the California Heart Association to use the Association's mailing list in sending out notices of its coming scientific meeting.

23. *Committee on Clinical Material for Teaching Hospitals:*

On motion duly made and seconded, it was voted

to extend to Dr. William L. Bender and his associates on the Committee on Clinical Material for Teaching Hospitals the thanks of the Council for the good work of the committee.

24. *C.P.S. Fee Schedule Committee:*

On motion duly made and seconded, it was voted to appoint Dr. Walter Beckh of San Francisco as chairman of the C.P.S. Fee Schedule Committee and Dr. A. Justin Williams, San Francisco; J. Philip Sampson, Santa Monica; Darrell Overpeck, Fresno; L. H. Fraser, Richmond; Ralph D. Anderson, Santa Ana; Dudley Saeltzer, Sacramento; and Paul Michael, Oakland, as members.

25. *Committee on Medical Economics:*

Dr. MacLean, former chairman of the Committee on Medical Economics, reported on a conference he and Messrs. Hunton and Waterson had held in New York with Ernest Dichter, Ph.D., following the close of the A.M.A. Annual Session.

Adjournment:

There being no further business to come before the meeting, it was adjourned at 5:20 p.m.

SIDNEY J. SHIPMAN, M.D., *Chairman*
ALBERT C. DANIELS, M.D., *Secretary*

Executive Committee Minutes

Tentative Draft: Minutes of the 227th Meeting of the Executive Committee of the California Medical Association, held in San Francisco, July 5, 1951.

The meeting was called to order by Chairman Lum at 4:00 p.m., Thursday, July 5, 1951, in the office of the Association.

Roll Call:

Present were President MacLean, President-Elect Alesen, Council Chairman Shipman, Speaker Charneck and Auditing Committee Chairman Lum, presiding.

Present by invitation were Executive Secretary Hunton, Legal Counsel Hassard and Executive Secretary Rollen Waterson of the Alameda-Contra Costa Medical Association.

1. *Public Relations:*

Discussion was held on the proposed public relations program outlined by the Advisory Planning Committee. Mr. Hunton proposed that the first step be the employment of field representatives who would be trained in the positive programs advanced and be assigned to specified territories in the state for the purpose of putting such programs into effect in all county medical societies. After thorough discussion it was regularly moved, seconded and voted to place Mr. Ed Clancy, field secretary, in charge of the entire program and to authorize the employment of not more than three field representatives at salaries not to exceed \$750 monthly. Several names of potential field representatives were offered.

2. *Location of Association Office:*

Mr. Hunton reported that additional office space would be needed immediately to handle the Association's business, including the public relations program. Additional space could be made available in the same building but at a high rental and requiring considerable rebuilding at the expense of the Association. Space of suitable size had also been located in a building at 518 Sutter Street, comprising the second floor of a building housing a retail store on the ground floor and the office of a radiologist on the third floor. This space could be rented for a considerably lower rental than is now paid and would require alterations at the expense of the Association to be transformed into an office. On motion regularly made and seconded, it was voted to authorize the northern members of the Executive Committee to inspect the proposed space, with power to act in authorizing its leasing. (Note: On July 10 Drs. Shipman and Lum inspected the 518 Sutter Street property and approved its being leased, subject to alterations representing approximately the savings in rental for two years.)

3. *Public Policy and Legislation:*

Mr. Hassard reported that an agreement had been reached with several state officials to cooperate in an effort to improve the salary and other considerations for physicians employed in state institutions. It was regularly moved, seconded and voted to refer this matter to the Committee on Hospitals, Dispensaries and Clinics.

4. *Student American Medical Association:*

On motion regularly made and seconded, it was voted to name Dr. Donald Cass of Los Angeles as C.M.A. representative on the Advisory Council to the Student A.M.A. chapter at College of Medical Evangelists.

On motion regularly made and seconded, it was voted to invite the representatives of the Student A.M.A. chapters at California medical schools to attend the Annual Sessions as guests of the Association.

5. *C.P.S. Study and Fee Schedule Committees:*

Discussion was held on the C.P.S. Study Committee and the C.P.S. Fee Schedule Committee and several potential appointees were named as alternates to the original list of names if the original nominees could not serve.

6. *State Department of Public Health:*

On motion regularly made and seconded, it was voted to appoint Dr. C. V. Thompson as the Association's representative on the advisory committee to the State Department of Public Health in the preliminary study of a morbidity survey in Santa Clara County. The Santa Clara County Medical Society has agreed to name one of its members as another member of this advisory committee.

7. *Study of Psychology:*

In line with a resolution adopted by the 1951 House of Delegates and confirmed by the Council, it was regularly moved, seconded and voted to appoint Dr. Wilbur Bailey as chairman of a committee to make a study of the practice of psychology in California, Dr. Bailey to name his own committee members.

8. *Humboldt-Del Norte Blood Bank:*

On motion duly made and seconded, it was voted to approve a loan of \$6,000 to the Humboldt-Del Norte Blood Bank, on the same terms of repayment as previously authorized for other borrowing blood banks and under the conditions previously approved by the Council in establishing the blood bank loan fund.

9. *Western Conference of Practical Nurses:*

Dr. Alesen reported on a meeting he had attended of the Western Conference of Practical Nurses, at which representatives of several organizations were present. The meeting considered, among other things, an educational program for practical nurses. Dr. Alesen suggested that the Association keep in touch with this organization.

10. *Employees' Retirement Program:*

Dr. Charnock, chairman of the Council's committee on employees' retirement program, discussed the advisability of extending the benefits of this program to individuals who devote the major portion of their time and effort to the affairs of the Association while not directly employed by it. It was agreed to give further consideration to this matter.

Adjournment:

There being no further business to come before it, the meeting was adjourned at 6:45 p.m.

DONALD D. LUM, M.D., *Chairman*

ALBERT C. DANIELS, M.D., *Secretary*

A Tribute to Dwight H. Murray

The California State Senate on July 19, 1951, adopted a resolution introduced by Senator Hugh M. Burns of Fresno, paying tribute to Dr. Dwight H. Murray of Napa, legislative chairman of the California Medical Association, on the occasion of his election as chairman of the Board of Trustees of the American Medical Association. The resolution reads as follows:

SENATE RESOLUTION NO. 202

Relative to Dr. Dwight Murray

Whereas, Dr. Dwight Murray, M.D., of Napa, California, has been elected chairman of the board of trustees of the American Medical Association; and

Whereas, Dr. Murray is well known to the Members of the Senate of the State of California through his capable representation of the California Medical Society and his long-time leadership in state and national medical affairs as a member of the board of trustees of the American Medical Association since 1947; and

Whereas, The Members of the Senate of the State of California, in recognition of the importance of the office of chairman of the board of trustees of the American Medical Association and with pride that such office is to be held by a California physician of such eminence and skill as is possessed by Dr. Murray, are desirous of expressing their confidence that Dr. Murray will carry out the duties and responsibilities of his new office in a manner to do credit to the California medical profession and to the State; now, therefore, be it

RESOLVED, by the Senate of the State of California, That Dr. Dwight Murray be, and he is hereby, tendered the sincere congratulations of this Senate upon his election to the office of chairman of the board of trustees of the American Medical Association; and be it further

RESOLVED, That the Secretary of the Senate be, and he is hereby, requested to transmit a suitably prepared copy of this resolution to Dr. Dwight Murray.

California Medical Association

CONSTITUTION and BY-LAWS

CONSTITUTION

ARTICLE I.—NAME, PURPOSES AND ORGANIZATION

Section 1.—Name

The name of this organization is California Medical Association (hereinafter referred to as the Association).

Section 2.—Purposes

The purposes of this Association are to promote the science and art of medicine, the protection of public health, and the betterment of the medical profession; to promote similar interests of its component societies; and to unite with similar organizations in other states and territories of the United States to form the American Medical Association.

Section 3.—Organization

This Association has two divisions: One, the Association as an organization; and Two, the Scientific Assembly. The Association as an organization includes component societies and their active members, the House of Delegates, Council, Commissions and Standing Committees. The Scientific Assembly includes all members of the Association and the scientific sections.

Section 4.—Definition of Component Societies

Component societies include all county medical societies (which may cover one or more counties) heretofore or hereafter chartered by this Association.

Section 5.—Component Society Charters

Charters to component societies may be granted and revoked as hereinafter prescribed, subject to the limitation that only one charter may be outstanding at any one time in any county.

ARTICLE II.—MEMBERSHIP

Section 1.—Classes of Members

The members of this Association shall consist of Active, Associate, Honorary, Retired, Life and Affiliate members.

Section 2.—Membership Qualifications, Rights, Privileges, Duties and Method of Election

The qualifications, rights, privileges, duties, obligations and methods of election of the several classes of membership are as stated in the By-Laws.

ARTICLE III.—GOVERNMENT OF THE ASSOCIATION

Part A.—House of Delegates

Section 1.—Composition

The House of Delegates shall consist of:

- (a) Delegates elected by the members of component societies;
- (b) Officers of the Association as hereinafter provided;
- (c) Ex officio, with the right to vote, the District Councilors, and
- (d) Ex officio, without the right to vote, the Past Presidents.

Section 2.—Representation

As the By-Laws shall provide, each component society shall be entitled to proportionate representation in the House of Delegates but with a minimum of two delegates.

Section 3.—Alternates

Alternates shall be elected, as specified in the By-Laws, in the same manner as delegates are elected. One alternate shall be seated in place of each delegate absent or disqualified for failure to attend meetings or other cause.

Section 4.—Terms of Delegates and Alternates

Delegates and alternates shall serve for two or three years as each component society may determine. One-half or one-third, as the case may be, of the allowed number shall be elected each year.

Section 5.—Quorum

A majority of the authorized number of delegates shall constitute a quorum.

Section 6.—Functions of the House of Delegates

The House of Delegates shall be the legislative body of the Association and shall exercise such other functions as the By-Laws may prescribe.

Section 7.—Issuance and Revocation of Charters

(a) The House of Delegates shall issue charters to medical societies of a county or combination of counties deemed eligible and which have made proper application therefor.

(b) The House of Delegates may suspend or revoke any such charter, after due notice and proper hearing, for cause. "Cause" shall be considered to be any conduct or action, on the part of any component society, deemed in contravention of the Constitution and By-Laws of the Association or the American Medical Association or their "Principles of Medical

Ethics." "Cause" shall further be deemed to be any conduct or action of a component society deemed inimical to the best interests of the Association.

(c) It may act on the withdrawal or secession of any component society from the Association and take such measures as are deemed advisable and proper for reinstatement of any component society which may have withdrawn or had its charter suspended or revoked.

(d) A two-thirds affirmative vote of the delegates present and voting shall be necessary for any action under the provisions of this section.

Section 8.—Sessions of the House of Delegates

In each year there shall be one or more sessions of the House of Delegates as fixed in the By-Laws. Special sessions may be called and held as provided in the By-Laws.

Part B.—Council

Section 9.—Composition

The Council shall consist of:

(a) Eleven District Councilors elected from the councilor districts specified in this Constitution; and

(b) Six Councilors-at-Large elected by the House of Delegates, and

(c) The President, President-Elect, and Speaker.

In addition, the Secretary-Treasurer and Editor, ex officio, but without the right to vote.

Section 10.—Councilor Districts

There are eleven districts as follows:

District Number One, comprising San Diego County.

District Number Two, comprising Imperial, Orange, Riverside, San Bernardino, Mono and Inyo counties.

District Number Three, comprising the County of Los Angeles.

District Number Four, comprising the County of Los Angeles.

District Number Five, comprising Ventura, Santa Barbara and San Luis Obispo counties.

District Number Six, comprising Kern, Kings, Tulare, Fresno, Madera, Merced, Mariposa, Stanislaus, San Joaquin, Calaveras and Tuolumne counties.

District Number Seven, comprising Monterey, San Benito, Santa Cruz, Santa Clara and San Mateo counties.

District Number Eight, comprising San Francisco County.

District Number Nine, comprising Alameda County and Contra Costa County.

District Number Ten, comprising Marin, Solano, Napa, Sonoma, Lake, Mendocino, Humboldt and Del Norte counties.

District Number Eleven, comprising Sacramento, Amador, Alpine, Eldorado, Placer, Nevada, Sierra, Yuba, Sutter, Yolo, Colusa, Glenn, Butte, Plumas, Tehama, Trinity, Shasta, Lassen, Modoc and Siskiyou counties.

Section 11.—Election of Councilors

(a) District Councilors shall be elected by vote of the delegates from each district in the manner and at the time specified in the by-laws; provided, however, that at the first meeting of the House of Delegates after a district councilor has been selected, his name shall be submitted to the House by the delegates from the district, and (1) if there is no challenge by any delegate then the speaker shall declare his election completed, and (2) if any delegate shall challenge the election on any ground, including fitness of the nominee of the district to serve as a district councilor, the questions presented by the challenge shall be submitted to a Qualifications Committee consisting of the President, President-Elect and one delegate, appointed by the speaker, from the councilor district involved. The Qualifications Committee shall consider all grounds upon which the nominee is challenged and report back to the House. If the committee reports in favor of confirming the nominee's election, the speaker shall declare him elected. If the committee reports against confirming the nominee's election, a three-fourths affirmative vote shall be necessary to sustain the report of the committee, in which event the nominee shall be ineligible to serve as the district councilor and the delegates from the district shall immediately proceed to the selection of another nominee for the vacant office. If an adverse report of the Qualifications Committee is not sustained then the nominee shall be declared elected by the speaker.

(b) Councilors-at-Large shall be elected one by one from nominations made on the floor of the House of Delegates. Not more than two councilors-at-large shall be elected from any one councilor district.

Section 12.—Councilors: Terms of Office

Councilors shall serve for terms of three (3) years; one-third to be elected in each year.

Section 13.—Council: Powers and Duties

Subject to the provisions of this Constitution, and all resolutions and enactments of the House of Delegates, the Council shall be vested with full and complete power and authority to manage, control, use, invest, reinvest, lease, make contracts in respect of, and concerning, convey, give, grant, transfer or otherwise dispose of all property and assets of whatever kind or nature owned by the Association, and shall also be vested with full and complete power and authority to do and perform all acts and to transact all business for and on behalf of the Association and to manage and conduct all the work and activities of the Association in carrying out the purposes thereof. The Council shall have such additional duties, powers and functions as are prescribed in the By-Laws.

Section 14.—Election of Councilors on Adoption of this Constitution

Upon the adoption of this Constitution, the delegates from each of the eleven councilor districts shall proceed to elect district councilors as follows: At the annual meeting at which this Constitution is adopted the councilors of the First, Fourth, Seventh and Tenth districts shall be elected for terms of one year each; councilors of the Second, Fifth, Eighth and Eleventh districts shall be elected for terms of two years each; and councilors of the Third, Sixth and Ninth districts shall be elected for terms of three years each. Thereafter, as each term expires the delegates from each district shall elect a district councilor to serve for a term of three years.

Upon the adoption of this Constitution, the councilors-at-large holding office at the time of the adoption shall serve the remainder of their terms of office specified in the previous Constitution and as their terms expire successors shall be elected in the manner and for the terms provided in this Constitution.

Upon the adoption of this Constitution and the election of eleven district councilors the terms of office of the nine district councilors elected prior to the adoption of this Constitution will immediately cease and terminate.

ARTICLE IV.—FUNDS, PROPERTY, DUES, ASSESSMENTS AND EXPENDITURES

Section 1.—Annual Dues

At each regular session the House of Delegates shall, by a majority vote, fix the annual dues to be paid by members of the Association for the ensuing calendar year. Dues payable by active members shall be uniform and equal, except that the House of Delegates may reduce dues for certain groups (by general classification) as the By-Laws may expressly permit.

Dues payable by associate members shall be uniform and equal but may be set at not less than one half the regular dues for active members.

Section 2.—Military Service

During any period at which the United States is at war or requires services of doctors of medicine under an universal military training or draft program, annual dues may be reduced or waived by the House of Delegates with respect to those members serving in the Armed Forces of the United States during the whole or any part of any year.

Section 3.—Leaves of Absence

The Council, on recommendation of a component society, may grant leaves of absence to active members who are seriously ill and cannot practice or who leave practice temporarily for postgraduate study or other purposes acceptable to the component society and the Council and during such leave a uniform reduction of dues shall be established by the Council; provided no leave may exceed one year but shall be subject to renewal.

Section 4.—Special Assessments, etc.

Funds may also be raised by any of the following methods: (a) publications of the Association; (b) voluntary contributions; (c) bequests, legacies, devises, and gifts; (d) special assessments levied by the House of Delegates; and (e) in any other manner approved by the House of Delegates. In the event that the House of Delegates levies any special or other assessment than the annual assessment of dues, it may, in the resolution levying the assessment, fix and determine the time within which such assessment must be paid, the class or classes of members of the Association upon whom it is levied, and the penalty, if any, including forfeiture or suspension of membership in this Association or the component society, or both, to result from nonpayment thereof within the time prescribed.

Section 5.—Annual Budget and Expenditures

At each regular session of the House of Delegates, the Council shall submit to it an itemized budget stating the proposed expenditures of the Association for the ensuing year. The budget may be altered or revised by the House of Delegates, but must be adopted by the House before adjournment of the session. After its adoption, no expenditures in excess of the amount of the budget item covering the subject of such expenditures may be made in the year covered by the budget by the Association or any of its officers, agents or employees, unless the Council by a three-fourths vote of all voting members shall first approve such excess expenditure by resolution duly adopted. Recurring items in the budget (fixed expenditures covering more than one year) shall, when first adopted, be binding as to subsequent budgets to the extent of commitments or obligations entered into by the Association within authority granted by the House of Delegates or this Constitution or the By-Laws.

Section 6.—Benevolence Fund

At least \$1.00 out of the annual dues paid by each active member of the Association shall be allocated to the Physicians' Benevolence Fund and shall only be used for the purposes as set forth in the By-Laws.

Section 7.—All Funds and Moneys to Be Paid to Secretary-Treasurer and Deposited With Depositary

All funds and moneys received for the Association by any officer or agent thereof shall be promptly paid to the Secretary-Treasurer and by him deposited with a depositary selected as such by the Council.

All depositaries selected by the Council shall be banks or trust companies duly licensed to transact business as such in the State of California.

Section 8.—Membership Interest in Association Property

No person other than an active member in good standing shall have any interest in the property of the Association and the interest of any active member therein shall cease when he ceases to be a member of the Association.

If any active member shall resign or otherwise cease to be an active member of the Association, all of his interest in and to all property of the Association shall cease and such cessation of membership shall operate as a release and assignment to the Association of all the right, title and interest of such member in and to all the property of the Association.

ARTICLE V.—REFERENDUM AND PETITION

Section 1.—Referendum and Petition

The right of referendum and petition shall be as set forth in the By-Laws.

ARTICLE VI.—OFFICERS

Section 1.—Officers

The officers of this Association shall be a President, a President-Elect, a Secretary-Treasurer, a Speaker of the House of Delegates, a Vice-Speaker of the House of Delegates and an Editor.

Section 2.—Powers and Duties of the President-Elect

The President-Elect shall act for the President in his absence or disability, and if the office of President becomes vacant the President-Elect shall then succeed to the Presidency to serve as President for such unexpired term and for the term of one year thereafter.

ARTICLE VII.—SCIENTIFIC ASSEMBLY

Section 1.—Objects

The Scientific Assembly of the California Medical Association is the convocation of its members for the presentation and discussion of subjects pertaining to the science and art of medicine.

Section 2.—Sections

The Scientific Assembly shall be divided into sections, each section representing that branch of medicine described in its title.

Section 3.—Creation of New Sections

New sections may be created or existing sections discontinued by the House of Delegates. The Scientific Assembly and its sections shall be conducted in accordance with the provisions of this Constitution and the By-Laws, and such other instructions by the House of Delegates or the Council as may not be in conflict therewith.

ARTICLE VIII.—MISCELLANEOUS

Section 1.—Incorporation

(a) To aid in carrying out the objects of the Association, the House of Delegates at any meeting of any regular or special session thereof may by a two-thirds vote of the members thereof present and acting, authorize, empower and direct the Council to cause the formation and organization of a non-profit corporation under the laws of the State of California, without capital stock, with such incorporators, name, purposes, objects, principal place of business, term, num-

ber of directors and directors to serve for the first year and until their successors are elected and have accepted office, and with such provisions regarding the voting power and property rights and interests of the members of the corporation and such further provisions in the Articles of Incorporation thereof, and with By-Laws and composed of such members representing this Association as the Council shall prescribe, fix and determine. The House of Delegates may at its option in connection with the granting and giving of such authority, power and direction to the Council, prescribe, fix and determine any or all of such matters pertaining to the said corporation, its Articles of Incorporation and any provision thereof, By-Laws and membership, and its action thereon shall bind the Council; and the House of Delegates at any meeting of any regular or special session thereof may by a two-thirds vote of the members thereof present and acting, authorize, empower and direct the Council to grant, assign, transfer, convey and deliver, or cause to be granted, assigned, transferred, conveyed and delivered to the said corporation upon the formation thereof without any consideration therefor, any property, real or personal, of the Association, which authorization, power and direction may be given prior or subsequent to the formation and organization of said corporation.

(b) To further aid in carrying out the objects of the Association, the House of Delegates at any meeting at any regular or special session thereof may, by a two-thirds vote of the membership thereof present and acting, authorize, empower and direct the Council to cause the formation and organization of one or more corporations under the laws of the State of California with such incorporators, name, purposes, county where the principal office for the transaction of business is to be located, first directors, the total number of shares, the aggregate par value, if any, of all shares, classes of shares, par value of any shares having par value, statement of the provisions, privileges and restrictions granted or imposed upon the respective classes of shares, or if the corporation be formed without capital stock the authorized number and qualifications of its voting and other rights of each class of members and the liability of each and all classes, to dues or assessments, and with such further provisions in the articles of incorporation thereof and with such by-laws as the Council shall prescribe, fix and determine; and the House of Delegates at any meeting of any regular or special session thereof may, by a vote of two-thirds of the members thereof present and acting, authorize, empower and direct the Council to grant, assign, transfer, convey or deliver or cause to be granted, assigned, transferred, conveyed or delivered to any of such corporations upon the formation thereof or to applicants for health and accident or other insurance in or from any of said corporations at or prior to the formation thereof without any consideration therefor, such funds and property, real or personal, of this Association as the House of Delegates shall from time to time authorize or ratify.

Section 2.—Seal

The Association shall have an Association seal consisting of a circle having on the circumference the words "California Medical Association, Eureka, 1856," with such further emblems, figures and words as the House of Delegates, on recommendation from the Council, shall prescribe.

The power to change the seal shall rest with the House of Delegates.

Section 3.—Amendments

Any member of the House of Delegates at any meeting of any session, other than a special session, thereof may present an amendment or amendments to any article or articles or any section or sections of any article or articles of this Constitution.

Such proposed amendment or amendments shall be in writing and shall be filed with the Secretary and shall thereafter be published at least twice in separate issues of the official journal of this Association prior to the next session of the House of Delegates.

At the said next session, other than a special session, of the House of Delegates, such proposed amendment or amendments shall be submitted to the House of Delegates, for consideration at any meeting of the House of Delegates during that session, and if two-thirds of the Delegates present and voting vote in favor thereof, the same shall be adopted.

Section 4.—Repeal of All Provisions of Existing Constitution

All articles and all sections and all parts of all articles of the existing Constitution are hereby repealed.

BY-LAWS**CHAPTER I.—COMPONENT SOCIETIES****Section 1.—Component Society Charters**

The charter of each component society shall provide that all the provisions of the Constitution and By-Laws of this Association in force at the time of the issuance of such charter, together with all amendments to either thereof thereafter adopted, in so far as the same are applicable, shall be an integral part of the constitution and by-laws of the component society to which the charter is issued and that the terms and provisions thereof shall control and govern such component society, the officers and members thereof, and that the constitution and by-laws of the component society shall not be amended in any way to conflict or be inconsistent with the Constitution and By-Laws of this Association. Each charter shall be signed by the President and the Secretary-Treasurer of this Association.

Section 2.—Revocation of Component Society Charters

The charter of a component society may be suspended or revoked on any of the grounds specified in the Constitution only in accordance with the following procedure:

(a) *Complaint.* A written complaint, stating the grounds for action, shall be filed with the Secretary-Treasurer by the Chairman of the Council pursuant to resolution adopted by the Council by the affirmative vote of two-thirds of the members thereof.

(b) *Notice.* The Secretary-Treasurer of the Association shall, within thirty days of its receipt by him, send by registered mail to the secretary of the component society concerned, a true copy of such complaint.

(c) *Hearing.* Hearing on such complaint shall be held by the House of Delegates at its first session occurring not less than three months after the date of its presentation to the Secretary-Treasurer of the Association.

(d) *Decision.* Suspension or revocation of the charter of a component society shall require a two-thirds affirmative vote of the members of the House of Delegates; provided, however, that the delegates of the component society concerned shall not vote, and their number shall not be counted in determining the necessary two-thirds majority.

Section 3.—Component Society Sections

(a) *Geographical or Specialty Sections.* A component society may authorize the formation and existence of branch geographical or specialty sections for scientific investigation and work only, and the members of such geographical sections or specialty sections must be members of such component society.

(b) *Members in Sections to Be Members of Respective Component Societies.* No geographical or specialty section shall be permitted to have any classes of members which classes in whole or in part include non-members of the component society of which any such geographical or specialty section is a branch or subdivision; provided that nothing in this section shall be construed as limiting the guest privileges of such non-members at meetings of such section.

CHAPTER II.—MEMBERSHIP**Section 1.—What Constitutes Membership**

The name of a doctor of medicine on the official roster of this Association, after it has been properly reported by the secretary of his component society, and after the dues or other assessments due this Association shall have been paid by the component society for each such member according to the class of membership held by each component society member, shall be prima facie evidence of membership.

Section 2.—Component Society Rosters of Members; Reports

(a) *Roster.* The secretary of each component society shall keep a roster of its members, on which shall be shown the full name, address, school and date of graduation, date of license to practice in this state, class of membership, and such other information as the Secretary-Treasurer of the Association shall prescribe.

(b) *Reports.* The secretary of each component society shall furnish the Secretary-Treasurer of the Association before the first day of March of each year a list of names and addresses of all members in good standing on the first day of January of each year, shall notify in writing the Secretary-Treasurer monthly of all changes in membership of the component society, and shall submit to the Secretary-Treasurer on forms which the Association shall provide, notice of each application for membership in such component county society with the name, address and all other particulars regarding the applicant known to the secretary.

Section 3.—Qualifications of Active, Associate and Affiliate Members

(a) *Component Societies Sole Judges.* Each component society shall, subject to the minimum requirements for eligibility as hereinbelow provided, determine the qualifications for membership for Active, Associate or Affiliate membership therein, and shall be the sole judge of the qualifications of applicants for such membership.

(b) *Qualifications for Active Members.* To be eligible for election to Active membership in a component society, an applicant must hold the degree of Doctor of Medicine issued to him by an institution of learning accredited at the time of the issuance of such degree by the Board of Medical Examiners of the State of California. He must hold an unrevoked license to practice medicine and surgery issued to him by the Board of Medical Examiners of the State of California, which certificate must have been recorded in the office of the County Clerk in the county in which he practices. He must be of good moral and professional character and must not support, nor practice, nor claim to practice, any exclusive or sectarian system of medicine. He must subscribe to the Principles of Medical Ethics of the American Medical Association and to such as may from time to time be adopted by the California Medical Association, and shall recognize the authorized officers of his component society and of this Association as the proper authority to interpret any doubtful points of ethics.

(c) *Qualifications for Associate Members.* To be eligible for election to Associate membership in a component society, an applicant must possess all the qualifications necessary for active membership except that he shall not be engaged in the private practice of medicine and need not hold a license to practice medicine or surgery granted by the Board of Medical Examiners. For the purposes of this section, a Doctor of Medicine engaged in the private practice of medicine is any physician who receives his principal compensation for professional services on a fee basis.

(d) *Qualifications for Affiliate Members.* To be eligible for election to affiliate membership in a component society, an applicant must be, and must continue to be throughout the term of his membership, an intern, resident or house officer in an approved hospital within the county of the component society concerned.

Section 4.—Qualifications and Election of Other Classes of Membership

(a) *Retired Members.* The Council, on recommendation of any component society, may grant retired membership to those active members who have ceased the practice of medicine to the extent and for reasons satisfactory to such component society and the Council, and who shall have been active members of the Association for a total of ten years prior thereto. Retired membership shall endure as long as the retired member does not engage in full time practice of medicine; but in the event that a member classified as retired resumes active, full time practice of medicine such resumption shall automatically terminate retired membership and re-establish active membership. Upon resumption of full time practice by any retired member, the secretary of his component society shall transfer such member from the retired classification to the active classification, and notify the Secretary of this Association, who shall do likewise with respect to the membership rolls of this Association.

(b) *Honorary Members.* The House of Delegates on recommendation by the Council may elect as honorary members any persons distinguished for their services or attainments as doctors of medicine or in the field of public health, or for research or other scientific work contributing to medicine.

(c) *Life Members.* Those life members elected prior to the adoption of these By-Laws shall remain as such with all of the rights and privileges pertaining to such membership contained in the prior By-Laws, but no new life members shall be elected after the date of the annual session of the House of Delegates at which this section is adopted.

(d) *Special Memberships.* The House of Delegates may, from time to time, establish special and limited classes of membership in this Association for undergraduate medical students, or for interns, house officers, or residents wherever a component society makes no provision for this class of membership. The House of Delegates may also, from time to time, establish other special and limited classes of membership and fix the dues, qualifications, duration and privileges of such membership.

Section 5.—Rights and Privileges of Membership

(a) *Active Members.* Subject to the provisions of the Constitution and these By-Laws, all active members shall be equally privileged to vote, to hold office and to enjoy all other rights and privileges of the Association.

(b) *Associate Members.* Subject to the provisions of the Constitution and these By-Laws, associate members shall have all the rights and privileges of Active Members except the right to vote or to hold office.

(c) *Affiliate, Honorary and Retired Members.* Members in these classes shall be privileged to receive publications of the Association at such rates as the Council may from time to time determine; they shall not have the right to vote nor to hold office.

Section 6.—Membership Where No Component Society Exists

Any Doctor of Medicine residing in an area in which there is no component society may apply for membership in the component society most convenient to the area in which he practices medicine, and if otherwise qualified he may be elected to membership therein.

Section 7.—Membership Where Major Office and Residence Are In Different Component Society Areas

A Doctor of Medicine may apply for membership only to that component society whose charter covers the area in which his major office for professional practice is located; provided that a Doctor of Medicine who resides in one county and practices in another may apply for membership to the component society whose charter covers the area in which his residence is located, if both such component society and the component society of the area in which his major office is located approve.

Section 8.—Membership as Affected by Transfer of Location of Office

A member who changes his office from the county through whose component county society he holds membership in this Association, to another county in which there is a component society, is eligible to membership in the component society of his new location on the presentation of a transfer card, and satisfactory evidence that his dues have been paid in full in the component society in which he holds membership; provided, however, that no evidence which would disqualify him for membership exists.

He shall forfeit his membership in this Association one year after such change of location of practice unless after proper application he is elected to membership in the society of the county to which he has moved.

Section 9.—Transfer Cards

When a member in good standing in a component society moves to another county or other jurisdiction in this state he shall, on request, be given a transfer card, without cost. He must assume such financial obligations as shall be deemed proper by the component society to which he is transferred, and to which he makes application for membership by transfer.

Section 10.—Termination of Membership

(a) *By Expulsion from Component Societies.* Expulsion from any component society, after due proceedings in accordance with these By-Laws, upon becoming final terminates all the rights and privileges in this Association of the member so expelled.

(b) *By Failure to Pay Dues.* If the annual assessments of dues, payable to this Association or to the American Medical Association by any member of this Association, are not paid in full on or before April 1 of any year, such member shall automatically lose his membership in this Association as of April 1 of such year. The Council of this Associa-

tion, in its discretion, upon payment of such unpaid dues, and any other assessments or dues accruing thereafter, may at any time reinstate such member.

(c) *By Revocation of Physician and Surgeon's Certificate.* Any member whose license to practice medicine and surgery in the State of California is revoked shall, upon receipt of written evidence of such revocation by the Secretary of this Association, thereupon cease to be a member of this Association.

(d) *Acts and Conduct Subjecting Member to Censure, Suspension or Expulsion by Component Society.* Any member of a component society who has been adjudged guilty of a criminal offense involving moral turpitude, or who has been duly adjudged guilty by his component society, in accordance with the procedural requirements of these By-Laws, of gross misconduct as a physician or a surgeon or of a violation of any of the provisions of the constitution or by-laws or principles of professional conduct of his society or of the Principles of Medical Ethics promulgated from time to time by this Association or by the American Medical Association, shall be subject to censure, suspension or expulsion from his society by such component society.

CHAPTER III.—DISCIPLINARY PROCEDURE

Section 1.—Disciplinary Procedure for Component Societies

The procedure to be followed by each component society with respect to the censure, suspension or expulsion of a member shall be:

(1) *Charges; Formal Requirements; a Formal Charge Must First Be Made.* Such charge must be in writing, signed by the accuser, and if made by a person other than a member of the society must be sworn to before an officer of the State of California authorized to administer oaths. Charges must state the acts or conduct complained of with reasonable particularity.

(2) *Charges; Filing; Secretary's Duties; Presentation to Board of Directors (or Grievance Committee).* Charges must be filed with the secretary of the accused member's component society. At the first regular or special meeting of the Board of Directors (or other governing body, whether called Council, Board of Trustees, Executive Committee, or any other name, all of which are herein included in the term "Board of Directors") of such component society held after charges are filed, the secretary must present said charges to the Board. The Board of Directors shall then or at any adjournment of said meeting, but not more than thirty days after the date of such regular or special meeting, consider the charges, and in its discretion determine whether or not further proceedings shall be conducted. If the Board determines that no further action shall be taken, the charges shall be dismissed.

If a component society has no board of directors and more than ten members, its members must, at a regular meeting of the society, elect a grievance committee of not less than five (5) active members in good standing; two members shall be designated by

the society to serve for a period of one year, two members shall be designated to serve for a period of two years, and one member shall be designated to serve for a period of three years. At the expiration of the terms of office of the respective members of such committee, successors shall be elected in like manner to serve for a period of three years each. Such grievance committee shall exercise all the power and perform all the duties herein conferred upon boards of directors in the manner and within the times herein provided. If a society has less than eleven members, the entire society, exclusive of the accuser and accused, shall constitute the grievance committee. All references herein to board of directors shall be deemed to include such grievance committees, and component societies of ten members or less.

(3) *Service of Charge Upon Accused.* If the Board of Directors determines that further action, with respect to said charges, shall be taken, the Board must, within fifteen (15) days after such decision, cause a copy of the charges to be served upon the accused by personally delivering a copy thereof to him, or by depositing a copy thereof in the United States mail, registered and addressed to the accused either at his last known office or at his last known residence.

(4) *Time and Place for Hearing; Service of Notice Thereof.* The Board of Directors shall, at said meeting at which its decision to proceed is made, fix a time and place for a hearing of said charges. Written notice of the time and place set for the hearing shall be served upon the accused within fifteen (15) days by personal delivery or registered mail as aforesaid.

The time so set for a hearing shall be not less than fifteen (15) days after the accused has been served as aforesaid, with a copy of the charges and with the notice of the time and place set for the hearing; said hearing must be held within the county in which the accused holds his county society membership. The hearing before the Board of Directors must actually commence within six months from the date of the filing of written charges. Failure to comply with this requirement shall constitute an automatic dismissal of the charges.

(5) *Right of Accused to Answer; Time to Answer; Formal Requirements.* The accused may, not less than five (5) days before the time set for a hearing, answer said charges. The answer shall be in writing and the original and three copies shall be filed with the secretary of the society; provided, however, that the failure of the accused to answer shall not be deemed to be an admission of the truth of the charges or a waiver of the accused's right to a hearing with respect to said charges.

(6) *Rules Governing Hearing; Duties of Referee of Society; Advice as to Procedure Only.* The Board of Directors shall give ample opportunity both to the accuser and the accused to be heard in person, and to present all testimony, evidence, or proofs which the accuser or the accused may deem necessary, provided that the Board may reject all testi-

mony, evidence, or proofs, which in the judgment of the Board are immaterial, irrelevant or unnecessarily repetitious.

Either the Council or the Executive Committee of the California Medical Association, whenever it shall come to the attention of either thereof that a disciplinary proceeding is pending before any component society, may of its own motion, and shall, upon the request of such component society or of the member or members thereof the subject of any such disciplinary proceeding, appoint a referee who may, but need not be, a member of the California Medical Association, and shall cause the Secretary of the California Medical Association to notify the secretary of such component society of such appointment. The referee so appointed shall preside at the hearing of said charges and shall make all decisions concerning the admission or rejection of testimony or other evidence and procedure. The referee shall not, however, have any voice nor participate in any manner in the determination by the Board of Directors of the disposition of the charges. During the hearing the referee shall perform all duties normally performed by the presiding officer of the Board of Directors.

(7) *Record of Proceedings; Shorthand Reporter; Duty of Secretary to Preserve Board Records; Right of Accused to Copy.* The secretary shall preserve the original of said charges with a certificate of personal delivery or of mailing of a copy or copies thereof, as the case may be, the original notice of the time and place set for the hearing with a certificate of personal delivery or of mailing of a copy or copies thereof, as the case may be, and the original of the answer filed by any member accused if an answer be filed. At the hearing, the Board of Directors shall, at the expense of the society, employ a competent shorthand reporter to record and transcribe into typewriting testimony adduced on behalf of the accuser and the accused and all rulings made. The original charges with certificate of service thereof, the original notice of time and place for hearing with certificate of service thereof, the answer or answers, if any be filed, all documentary evidence introduced at the hearing, the typewritten transcript of the testimony and the written decision of the Board of Directors shall constitute the record of the entire proceedings. The Secretary shall, upon receipt from accused of a sum sufficient to defray the cost thereof, cause a copy or copies of such record to be transcribed, certified and furnished to the accused.

(8) *Decision of Board; When Must Be Written; Rules Governing Vote of Board.* The Board of Directors, after having given the accuser and the accused member full opportunity to be heard, shall conclude the hearing and shall render its decision in writing not more than thirty (30) days thereafter. Hearing shall include any oral arguments and the filing and consideration of any written briefs. The Board of Directors by a two-thirds affirmative vote of all the eligible members of the Board present and voting may exonerate or may censure, suspend or expel

the accused member as the facts in its opinion may justify.

The decision of the Board of Directors may be expressed in resolution adopted by said vote. The decision may, but need not, contain an opinion and need only be signed by the secretary or the acting secretary of the component society.

The failure of at least two-thirds of all the members of the Board of Directors present and voting to agree upon the disposition of the charges shall act automatically as a dismissal of the same. No member of the Board of Directors not present at the said hearings for the entire time thereof shall be entitled to vote with respect to the disposition of the charges.

(9) *Suspension; Maximum Period; Status of Suspended Member.* If the Board of Directors shall determine to suspend an accused member, the term of such suspension shall be within the discretion of the Board, provided that in no case shall a member be suspended for a period greater than one year. A suspended member shall have no rights or privileges in the society, provided that at the expiration of the period of suspension such suspended member shall not be reinstated to membership in good standing until he applies for reinstatement and pays all dues accrued during said period of suspension.

(10) (a) *Board's Decision; Secretary to Send Copies.* Within ten (10) days after the decision of the Board of Directors, the secretary of the society shall transmit a copy of the decision to the Board, to the accused member or members and to the Secretary of this Association.

(b) *Board's Decision Final; Subject to Appeal.* The action of the Board of Directors of a component society shall be final, subject only to appeal to the Council of the California Medical Association in such cases as are provided in these By-Laws.

The decision of the Board of Directors shall not become effective until the expiration of ten days after time during which an appeal may be taken to the Council of this Association. Filing an appeal with the Secretary of this Association shall automatically stay the execution of the decision of the Board of Directors of the component society until written notice of the action of the Council of this Association with respect to appeal has been received by the secretary of the component society from which the appeal was taken.

(c) *Technical Rules of Evidence Not to Govern Disciplinary Hearings.* All hearings with respect to the disposition of charges against a member of a component society shall be held and conducted in such manner as to ascertain all the facts fairly to the accuser and accused, eliminating all formal or technical rules and requirements which ordinarily pertain to judicial proceedings.

(d) *Members Agree That No Cause of Action Shall Accrue.* Any person so charged, censured, suspended, or expelled shall have no claim or cause of action against this Association, a component society or any member, director, councilor or officer, thereof

by reason of such charges, or the hearing or the consideration thereof or censure, suspension or expulsion therefor.

(e) *Expelled Members; Right to Apply for Membership; When Accrues.* Any person whose membership has been involuntarily terminated in a component society by reason of violation of these By-Laws may apply for membership after the expiration of one year from the date said membership was terminated, and such application shall be considered in the same manner as a new application for membership.

Section 2.—Procedure for Appeal to Council

A member of a component society censured, suspended or expelled by his county society may appeal from the action of such component society to the Council of this Association within the period of two months succeeding the date of such censure, suspension, or expulsion. Appeals shall be in writing and be filed within the said period of two months in the office of the Secretary of this Association. Said appeal shall be accompanied by a copy of the record of the entire proceedings before the component society duly certified by its secretary, provided the Chairman of the Council may, in his discretion, extend the time of the appellant to file said record. Upon the filing of an appeal the secretary shall present it to the first subsequent meeting of the Executive Committee or the Council. Appeals shall be heard by the Council only after reasonable notice of not less than ten (10) days in writing of the time and place of the hearing of the appeal has been given to the appellant member and the president and secretary of the component society as provided in Section 3 hereof.

Section 3.—Rules Governing Appeals

In hearing appeals, the Council shall review all questions of procedure, and may, in its discretion, review the evidence contained in the record of the original proceedings held before the Board of Directors of the component society. The Council may make findings of fact contrary to, or in addition to, those made by said Board of Directors. Such findings may be based on the evidence adduced before said Board of Directors, either with or without the taking of evidence by the Council. The Council shall use any lawful means which in its judgment will best and most fairly present all the facts involved. The Council may, for the purpose of making such findings or for other purpose in the interest of justice, take additional evidence of or concerning facts material to the questions involved, or may, for such purpose, appoint a committee of its members or any notary public to act as referees or referee for the taking of such additional evidence.

Such referee or referees shall render a report in writing to the Council, which report shall contain a clear statement of the facts found by the referee or referees from the testimony or evidence adduced.

The Council may affirm, reverse or modify the decision of the Board of Directors or make such other disposition of the proceedings as it may deem proper.

In every case of an appeal the individual councilors and the Council, through a committee thereof, prior to any hearing being held upon the appeal, shall exert all proper efforts at conciliation and compromise.

This Association may be represented by its attorney to advise the Council upon procedural questions only.

The decision of the Council shall be final and bind the appellant member and the component society.

CHAPTER IV.—SESSIONS AND MEETINGS; SCIENTIFIC SECTIONS

Section 1.—Division of Scientific Work

(a) *Scientific Sections.* The scientific work of the Association shall be divided into fifteen scientific sections, as follows: General Medicine; General Surgery; Pediatrics; Eye, Ear, Nose and Throat; Urology; Anesthesiology; Obstetrics and Gynecology; Radiology; Industrial Medicine and Surgery; Pathology and Bacteriology; Dermatology and Syphilology; Neuropsychiatry; General Practice; Public Health; and Allergy.

(b) *Rules of Procedure of Scientific Sections.* Each scientific section shall adopt rules of procedure for its own better government and work. Its officers shall be responsible for the proper keeping of records of scientific and business meetings.

(c) *Officers of Sections.* The members of each section shall at the regular annual session of the Association elect a chairman and a secretary to serve for the term of one year.

(d) *Program.* Each of the sections shall present a scientific program at the annual session of the Association, and its officers shall be responsible for the proper preparation of the same, and for the proper cooperation with other scientific sections during the annual meeting.

Section 2.—Registration at Annual Sessions Necessary for Participation Therein

Each member in attendance at any session shall register, after his right to membership has been verified by reference to the records of this Association. No member shall take part in any of the proceedings of any session until he has complied with the provisions of this section of the By-Laws.

Section 3.—Addresses and Papers at Annual Session

(a) The program at Annual Sessions shall be divided between general meetings and section meetings as the Council shall deem appropriate.

(b) At the General Meetings shall be delivered the annual address of the President and, with the sanction of the Council, such other addresses and reports as may be deemed desirable.

(c) Excepting the President's address and such other addresses and reports as the Council may determine, no address or paper shall occupy more than twenty minutes in delivery.

(d) No member, except by unanimous consent, shall speak more than once in the discussion of any paper nor longer than five minutes at any one time. This subsection of the By-Laws shall be printed on all programs of general and section meetings.

Section 4.—Scientific Papers Property of Association

All papers read before this Association shall be its property.

Each paper, when it has been read, shall be deposited with the secretary of the section, by him to be promptly turned over to the Secretary of the Association.

Section 5.—Scientific Papers Not to Be Published Elsewhere

Authors of papers read before this Association shall not cause them to be published elsewhere except with the consent of the Committee on Publications.

Section 6.—Committee on Arrangements for Annual Session

(a) *Appointment and Duties.* The Chairman of the Council, subject to the approval of the Council, shall, at least six months before each annual session, appoint a Committee on Arrangements for the sessions of the ensuing year, one member thereof being designated as the general chairman. This committee shall consist of five members.

The Secretary-Treasurer of the Association shall be ex officio a member of this committee.

This committee shall have charge of all local arrangements not otherwise provided for.

The terms of office of members of this committee shall expire when the succeeding committee on arrangements is appointed.

As the local Committee on Arrangements this committee shall provide suitable meeting places and shall have general charge of all local arrangements. The committee shall have power to appoint local advisory members and subcommittees to aid in its work.

(b) *Commercial Exhibits.* The Council shall decide what portion of the income from commercial exhibits or other convention services shall go to the local Committee on Arrangements. The location and rules for the commercial exhibits and other accessory annual session activities shall be subject to the approval of the Council.

(c) *Local Convention Expenses.* The Council shall decide what portion of the local expenses shall be borne by the Association.

(d) *Report on Committee on Arrangements.* The Committee on Arrangements shall make and file with the Secretary-Treasurer of the Association an itemized, detailed report of all its receipts and disbursements, and shall remit any moneys due the Association remaining in its possession, to the Secretary-Treasurer.

Section 7.—All Meetings of Same Session Shall Be in Same Locality

The general meetings of the Association, the meetings of the House of Delegates, and the meetings of the Scientific Assembly and its sections at any session shall be held in the State of California at the same locality and in buildings as convenient of access, one to the other, as may be possible.

CHAPTER V.—HOUSE OF DELEGATES

Section 1.—Secretaries of Component Societies To Furnish Lists of Delegates and Alternates: Election and Lists

Each component society shall elect a delegate and one alternate for such delegate in an aggregate number of delegates and alternates equal to the total number of delegates and alternates to which the component society is entitled. At least sixty days prior to the next scheduled session, the secretary of each component society shall forward to the Secretary-Treasurer of the Association, on forms provided by the Association, the names and addresses of each delegate and his alternate elected by such component society, and shall certify thereon the dates of election and expiration of terms of service of each delegate and his alternate.

Failure to conform to this provision shall constitute grounds for disqualification of the delegation in default for the scheduled session, at the discretion of the House of Delegates.

Section 2.—Representation

Commencing with the 1952 regular session of the House of Delegates, each component society shall be entitled to one delegate with one additional delegate for each fifty active members, or major fraction thereof, as of the first day of November of the preceding year; provided, however, that each component society shall be entitled to a minimum of two delegates.

Section 3.—Limitations on Seating of Delegates

Only duly elected delegates or their elected alternates may be seated at any session of the House of Delegates unless the Secretary of the Association has been given due notice of substitution at least fifteen (15) days in advance of the session.

Section 4.—Disqualification of Delegates or Alternates for Absence From a Session

Any delegate absent without good cause from two or more consecutive meetings of the House of Delegates, and who has failed to give fifteen days' notice to the Secretary of the Association of his inability to be present, shall thereupon be disqualified as a delegate and, in addition, ineligible for reelection as a delegate or alternate for three years immediately succeeding the expiration of his term; except that the Committee on Credentials may excuse absence on presentation of good cause therefor.

Section 5.—Notification of Delegates

The secretary of each component society promptly shall notify in writing each delegate and alternate immediately after his election to such office, and shall expressly direct each delegate's and alternate's attention to the provisions of Section 4 above.

Section 6.—Qualifications of Delegates and Alternates

At least three (3) years' active membership in good standing in the component society immediately preceding election shall be required for election as delegate or alternate.

Section 7.—Sessions and Meetings

(a) In each year there shall be two regular sessions of the House of Delegates; the time and place of such sessions to be determined by the Council as far as possible in advance and notice thereof published in the Journal of the Association. One of these sessions shall be held in the first six months of each calendar year and is designated the Annual Session; the other shall be held in the last six months of each calendar year and is designated the Interim Session.

(b) In addition to regular sessions, special meetings of the House of Delegates may be called at any regular or special meeting of the Council, by a two-thirds vote of all the members of the Council, or by written call stating the object of the meeting, filed with the Secretary in the office of the Association and signed by one-half or more of the members of the House of Delegates. Upon the filing of such call with the Secretary, the Council shall within thirty (30) days thereafter fix the time and place for the holding of such special meeting and cause written notice thereof stating the object of the meeting to be sent by United States mail, postage fully prepaid, to each member of the House of Delegates, addressed to him at his office or place of residence, as shown by the records of the Secretary's office, at least fifteen (15) days prior to the date of the meeting.

(c) Resolutions and other new business may be introduced at either regular session, but shall not be acted upon until the next regular session; provided, however, that any resolution designated as an emergency measure may be acted upon at the session in which it is introduced, but shall require a two-thirds affirmative vote for adoption.

Section 8.—House of Delegates Committees

Prior to or at the commencement of each annual session the Speaker of the House shall appoint from the members thereof the following committees:

1. A Committee on Credentials,
2. A Reference Committee on Finance, to review the reports of the Secretary-Treasurer and Executive Secretary and to study and make recommendations to the House of Delegates on the budget submitted by the Council and the amount of dues for the ensuing year.

3. A Reference Committee on the reports of Officers, Council, Standing and Special Committees, and

4. Two or more Reference Committees on resolutions, amendments to the Constitution and By-Laws, and new and miscellaneous business (the Speaker may allocate amongst these committees all business properly referable to them).

Section 9.—Membership of Credentials and Reference Committee

Each of the aforesaid committees shall consist of three members, the chairman of each to be designated by the Speaker.

The Speaker, the House concurring, shall refer said reports, resolutions, and business to the respective Reference Committees, but may allocate among them any of said reports, resolutions or portions thereof, and other business, to avoid duplication and to expedite the business of the House of Delegates.

Each Reference Committee shall prepare a written report dealing with and making recommendations on all matters submitted to it. In those instances in which resolutions or other matters remain before a Reference Committee between meetings of the House of Delegates, copies of such resolutions or other matters and the recommendations of the committee thereon shall be mailed or delivered by the Secretary to each elected delegate and alternate at least thirty days (or if less than thirty days intervenes between meetings, as early as possible) prior to the meeting of the House of Delegates at which such resolutions or other matters and recommendations concerning them are to be considered. The report of each committee may be acted upon as a whole or section by section, as the House may determine.

Section 10.—Duties of Credentials Committee

The Secretary of the Association shall supply the Committee on Credentials with the necessary information concerning the membership of the House of Delegates.

The Secretary shall give this committee a list of component societies, showing the total membership as of November 1 of the preceding year. This committee shall ask each delegate and alternate to present his written credentials, but shall accept the official written list submitted by the secretary of any component society; provided that such written list be sent to the Secretary of the Association at least fifteen days before the beginning of the annual session.

The Committee shall make a written report to the House of Delegates of the delegates and alternates entitled to membership therein.

Section 11.—Special Committees of House of Delegates

The Speaker, the House of Delegates concurring, shall have the right to appoint special committees of the House for special work. All committees of the House of Delegates shall present their reports to the House of Delegates in writing.

Section 12.—Loyalty

The Committee on Credentials shall require each delegate and alternate who desires to be seated as a member of the House of Delegates, to subscribe to the oath or affirmation in the form required for officers under Section 3 of Chapter XIII. In the event of refusal to subscribe to such oath, the Credentials Committee may at its discretion refuse to include such person in its written report to the House of Delegates designating the delegates and alternates entitled to membership therein. Any person refused a seat by action of the Credentials Committee shall have the right to appeal to the House and by majority vote the House may overrule the Credentials Committee and seat such person as a delegate.

CHAPTER VI.—COUNCIL

Section 1.—Council: Organization

At the first meeting of the Council held after the adjournment of the last meeting of the House of Delegates at the annual session of the Association, the Council shall organize by the election of one of the Councilors as Chairman of the Council, who shall serve as such up to the first Council meeting held after the adjournment of the last meeting of the House of Delegates of the next succeeding annual session of the Association; and a Vice-Chairman who shall hold office for the same term, and who, in the absence of the Chairman, shall perform the duties of the Chairman. The Secretary-Treasurer of the Association shall serve as the Secretary of the Council.

Section 2.—Registry

The Secretary-Treasurer, in writing, shall request each Councilor to register his address where he desires all notices to be sent to him by mail or telegram.

Section 3.—Quorum

A majority of the voting members of the Council shall constitute a quorum.

Section 4.—Meetings

(a) The time and place of meeting shall be fixed by the Council at a previous meeting and at least ten days notice shall be given each Councilor by the Secretary of the time and place of the meeting.

(b) The Council shall also meet on the call of the Chairman or upon written request of at least three (3) Councilors filed with the Secretary stating the purpose of the proposed meeting. Written notice of the time, place and object of such meeting shall be given by the Secretary to all members of the Council at least three (3) days prior to such meeting.

Section 5.—Order of Business

At meetings of the Council, business shall be transacted as the Council may determine from time to time by resolution.

The Council shall provide and fix the order of business of the House of Delegates at each session, provided that the House of Delegates may change the order of business by a majority vote.

Section 6.—Executive Committee of Council

The Executive Committee shall consist of the President, President-Elect, Chairman of the Council, Chairman of the Auditing Committee, and the Speaker of the House of Delegates. The Secretary-Treasurer and Editor shall be members *ex officio*, but without the right to vote.

(a) *Officers.* The Executive Committee shall elect its own chairman. The Secretary-Treasurer of the Association shall act as the secretary thereof.

(b) *Quorum.* Four members shall constitute a quorum.

(c) *Duties and Powers.* The Executive Committee shall aid and assist the officers and the Council in the transaction of the business of the Association in the intervals between the meetings of the Council. It shall have such additional duties and powers as are imposed upon it by this Constitution and the By-Laws. It shall have such advisory powers and such other duties as the Council shall from time to time determine.

(d) *Records.* It shall keep a record of its proceedings and report the same to the Council.

(e) *Executive Committee Meetings.* The Executive Committee shall meet on call of the President, the Chairman of the Council or the Chairman of the Executive Committee, on forty-eight hours' notice by mail or telegraph to the members thereof, if the meeting is to be held at the office of the Association; otherwise on at least three days' notice of the time and place of meeting.

(f) *Authorization or Approval of Council Necessary.* All of its acts and proceedings, unless expressly provided for by this Constitution and the By-Laws, shall be expressly authorized or ratified and approved by the Council.

Section 7.—Auditing Committee of Council

The Chairman of the Council, subject to its approval, shall appoint an auditing committee of three members, designating one of the members as its chairman, the duties of which committee are hereinafter specified.

Section 8.—Duties of District Councilors

Each District Councilor shall be organizer, peace-maker and censor for his district. He shall visit each county in his district at least once a year for the purpose of organizing component societies where none exist, of inquiring into the condition of the profession, and of maintaining touch with the activities of the component societies of his district. He shall in writing make an annual report of this work and of the condition of the profession of each county in his district to the Council, which shall take such action thereon as it may deem best.

Section 9.—Expenses of Councilors and Officers

Councilors and officers shall be allowed railroad fare or mileage, plus an allowance for maintenance expense, while absent from their places of residence; (a) in attending Association, district or county society meetings; (b) meetings of committees of the Association; (c) authorized councilor or officer visits to county societies; (d) and otherwise when on official business, authorized or approved by the Council.

Section 10.—Mail Ballot

The Chairman of the Council, at any time, may direct the Secretary to submit any urgent matter or question to the members of the Council by mail ballot, the question or proposition being prepared through conference of the Secretary with Chairman of the Council and the Chairman of the Executive Committee; and the vote of two-thirds of the members upon such question by mail or telegraph shall be binding upon the Council.

Section 11.—Offices

The Council shall provide and secure such offices for the Association as may be required to conduct its activities and business properly.

Section 12.—Employment of Secretary-Treasurer, Assistant Secretaries, Editor and Associate Editors

The Council shall employ a Secretary-Treasurer and an Editor, and, in its discretion, one or more Assistant Secretaries or Associate Editors. The terms of their employment shall be such as are satisfactory to the Council, provided, however, that no contract of employment shall, by its terms, exceed a period of three (3) years from the date of the organization meeting at which such contract is authorized.

Section 13.—Qualifications of Secretary-Treasurer and Editor

No person shall be eligible to the office of Secretary-Treasurer or Editor or Associate Editor who does not hold the degree of Doctor of Medicine, but membership in this Association shall not be a necessary qualification for the offices of Secretary-Treasurer, Editor or Associate Editor.

Section 14.—Executive or Field Secretaries or Representatives

The Council may employ one or more Executive or Field Secretaries or representatives, who need not be physicians or members of the Association. The duties of such a representative or representatives, if appointed, shall be determined by the Council by resolution.

Section 15.—Legal Counsel

The Council at its annual organization meeting shall appoint one or more legal advisers, giving each such title as may be deemed proper. It shall fix the amount of retainer and other fees.

The Council shall have the right to request the attendance of Counsel of the Association at any meetings at which it might desire his presence and

advice, and at such meetings he shall call attention to matters in which the legal aspects may be of importance, and shall give such other opinions in special matters as may be requested of him by the Council.

The General Counsel shall present in writing as promptly as the same may be properly prepared, such legal opinions as may be requested by the House of Delegates, the Council or the Executive Committee.

CHAPTER VII.—COMMITTEES

Section 1.—Standing Committees

The standing committees of this Association shall be as follows:

- (a) Scientific Work
- (b) Public Policy and Legislation
- (c) Medical Defense
- (d) Medical Education and Medical Institutions
- (e) Hospitals, Dispensaries, and Clinics
- (f) Medical Economics
- (g) Associated Societies and Technical Groups
- (h) History and Obituaries
- (i) Industrial Practice
- (j) Postgraduate Activities
- (k) Public Relations
- (l) Physicians' Benevolence Committee
- (m) Military Affairs and Civil Defense
- (n) The Reference Committees of the House of Delegates

until final adjournment of each regular session.

Section 2.—Standing Committees; How Elected; Term of Office

Unless otherwise provided in these By-Laws, each of the standing committees (except House of Delegates Reference Committees) may consist of one member of the Council and two other members. Members of standing committees (other than House of Delegates Reference Committees) shall serve for a term of three (3) years. One member of each of these committees shall be nominated annually by the Council and if approved by the House of Delegates shall be deemed elected.

Section 3.—Report Procedure for All Committees

Regular standing and special committees of the Association may make investigations and surveys on authorization of the Council or House of Delegates, but all recommendations and reports of all committees (unless expressly otherwise provided in the Constitution or By-Laws) must be submitted only to the Council or House of Delegates. Other than as herein stated no committee is authorized to act for or represent this Association.

Section 4.—Advisory Groups to Standing Committees

To aid it in its work, each committee, if it so desires, shall have the power to appoint an Advisory Group to its committee, consisting of from two to ten members. Such advisory members, if present at a regular committee meeting, shall not have the right to vote.

Section 5.—Officers of Standing Committees

The chairman of each of these committees, except the Committee on Public Relations, shall be nominated and elected annually by the Council, by and with the approval of the House of Delegates. The chairman of the Committee on Public Relations shall be elected by said committee, subject to the approval and confirmation of the Council, and in the event of a failure to elect within sixty days after adjournment of the annual session the Council shall elect said chairman. Each of these committees shall, each year, except as otherwise provided in these By-Laws, at its first meeting or official consultation, during or following the annual session elect its own secretary.

Section 6.—Secretary-Treasurer's Notice to Standing Committees

The Secretary-Treasurer of the Association, within one month after the annual session, shall write the Committee Chairman of the preceding year, to call a meeting for organization and consideration of any business. The Secretary shall also send a copy of this letter to each of the other members of the committee.

Section 7.—Annual Reports of Standing Committees

At least sixty days prior to the annual session, each of these committees shall submit a written report to the Council on its work during the preceding year, the same to be printed in the Pre-Convention Bulletin as otherwise provided.

Section 8.—Committee on Scientific Work

The Committee on Scientific Work shall consist of the Secretary-Treasurer, the secretaries of the sections on general surgery and general medicine and three other members to be elected by the Council, each of these three members to serve three years, one member being elected each year. The Secretary-Treasurer shall be chairman.

This committee shall determine the character and scope of the scientific proceedings of the Association for each session, and shall invite the guest speakers, subject to the instructions of the Council.

At least thirty days previous to each annual session it shall prepare and issue a program announcing the order in which papers and discussions shall be presented.

This committee shall have one joint session with the section secretaries, at a time and place to be designated by the chairman of the committee, at least forty-five days prior to the annual session, to coordinate more efficiently the various activities of the Association at its annual session. The chairman of the local committee on arrangements shall be invited to attend this meeting.

Section 9.—Committee on Public Policy and Legislation

The Committee on Public Policy and Legislation shall consist of three elected members, and ex officio, the President and President-Elect.

The chairman of the committee, and in his absence, the President, shall act as chairman at the joint meetings of this central state group and of auxiliary county groups.

(a) *Functions of the Committee.* The Committee on Public Policy and Legislation and its auxiliary county groups shall represent the Association in securing and enforcing legislation in the interest of public health and of scientific medicine, subject, however, to the approval of the Council.

(b) *County Auxiliary Committees on Public Policy and Legislation.* Each component society shall appoint or elect three of its members as members of its auxiliary Committee on Public Policy and Legislation, designating one member as chairman; and the component society secretary shall send promptly the names and addresses to the Secretary of this Association.

(c) *Work of Auxiliary County Committees.* The Committee on Public Policy and Legislation of this Association, with the sanction of the Council, shall formulate the duties of these county auxiliary committees and supply each member with a copy of its suggestions and instructions. The auxiliary committeemen shall be accountable to their component societies and to the Council of this Association for prompt and continued cooperation with the Committee on Public Policy and Legislation of this Association.

Section 10.—Committee on Medical Defense

The Committee on Medical Defense, subject to the approval of the Council, shall prepare plans and establish rules for the protection of the legal rights of members of this Association against whom suits for alleged negligence have been threatened or brought.

It may assist in the defense of any member sued for alleged negligence if the member was in good standing and had complied with the rules of the Council when the service on account of which suit was threatened or brought was rendered—provided that the committee determines that the position of the member merits such action.

Section 11.—Committee on Medical Education and Medical Institutions

The Committee on Medical Education and Medical Institutions shall serve in this State for the Council on Medical Education of the American Medical Association.

It shall keep in touch with the problems pertaining to medical education and to medical and other institutions of training for medicine and the healing art.

Section 12.—Committee on Hospitals, Dispensaries and Clinics

The Committee on Hospitals, Dispensaries and Clinics shall serve in this State for the Council on Hospitals of the American Medical Association.

It shall keep in touch with the problems arising in the fields of work of all types of hospitals, dispen-

saries and clinics giving special attention to those activities that are, or tend to become, a menace to the best interests of scientific medicine and of the profession and its members.

Section 13.—Committee on Medical Economics

The Committee on Medical Economics shall investigate matters affecting the economic status of doctors of medicine.

Section 14.—Committee on Associated Societies and Technical Groups

The Committee on Associated Societies and Technical Groups, subject to the instructions of the Council, shall endeavor to create proper liaisons between this Association and other state and national medical organizations, as well as with the organizations of related professions, such as dentistry, pharmacy and nursing. It shall also endeavor to bring about a proper understanding with non-medical organizations or groups of technicians and others whose work has a bearing on or is related to the practice of medicine.

Section 15.—Committee on History and Obituaries

The Committee on History and Obituaries shall compile and prepare for the archives and for the publications of the society suitable articles on the history of the Association and statements concerning deceased members. The Editor and the Secretary shall be members of this committee, ex officio.

Section 16.—Committee on Industrial Practice

The Committee on Industrial Practice shall keep in touch with matters and problems peculiarly connected with industrial practice.

Section 17.—Committee on Postgraduate Activities

The Committee on Postgraduate Activities, of which the Secretary-Treasurer shall be an ex officio member, shall use its best efforts to promote the postgraduate and clinical courses and instruction among the component county units of the Association.

The supervision of such postgraduate and clinical courses and instruction shall be carried on through the central offices of the Association, the Council being empowered to defray travel expenses of guest speakers and other costs incident to such work to such amount as in the judgment of the Council may be deemed proper. In the development of such postgraduate and clinical courses and instruction, it is stipulated that the component societies, through their constituted representatives, shall cooperate with the Standing Committee on Postgraduate Activities and shall also arrange to bear a proper proportion of the expense thereof of such amount as may be mutually agreed upon.

Section 18.—Committee on Public Relations

The Committee on Public Relations shall consist of the chairmen of the following committees: Public Policy and Legislation, Medical Economics, Associated Societies and Technical Groups, the President,

President-Elect, and two additional members appointed by the Council.

The committee shall be responsible to the Council and the House of Delegates for all of its activities.

The Council or the Executive Committee may instruct the Committee on Public Relations, and outline to it certain policies and duties which shall be executed through the Director of Public Relations. In the event of any disagreement between the committee and the Council or the Executive Committee as to any activity or policy, the decision of the Council, after full discussion and hearing, shall be final.

The committee shall make recommendations to the Council for approval as to the time, the place, the number of meetings and the budget of the Department of Public Relations, provided that the Secretary shall call the first meeting of the committee within thirty (30) days following the annual meeting of the Association.

The Director of Public Relations shall be appointed by the Council (after consultation with the Committee on Public Relations) annually at the organization meeting of the Council. He shall serve at the pleasure of the Council and the Committee. He shall act under the supervision and instruction of the chairman of the committee in such matters as shall be approved and sanctioned by the committee, and be responsible to the committee.

The Council shall arrange with the general counsel to give the committee all legal aid.

The committee shall annually at its first meeting elect its own chairman, subject to the approval and confirmation of the Council. The Secretary of the Association shall be ex officio secretary. A majority of the committee shall constitute a quorum.

Section 19.—Physicians' Benevolence Committee

The Physicians' Benevolence Committee shall administer those funds of this Association hereinafter designated as comprising the Physicians' Benevolence Fund. These are:

(a) The funds which may from time to time be allocated to it, from the general funds of the Association, by the Council or by the Constitution, are the funds for this committee.

(b) All bequests, voluntary contributions, and donations, from any source whatever, that may be received by this Association for the express or implied purpose of aiding needy members and their dependents.

Funds contained in the Physicians' Benevolence Fund may from time to time be disbursed by the Physicians' Benevolence Committee.

Section 20.—Committee on Military Affairs and Civil Defense

The Committee on Military Affairs and Civil Defense shall have the duty and responsibility to consult with constituted authorities concerning these subjects and administer problems of civil defense and of a military nature for the California Medical Association.

Section 21.—Publication of Committee Reports in Pre-Convention Bulletin

Reports of the standing and special committees, as approved, deleted or modified by the Council, shall be published in a pre-convention bulletin or in the official journal of the month preceding the date of the annual session of the Association. Such reports must be in the hands of the Secretary-Treasurer at least sixty days in advance of the annual session.

If a committee fails to send in its report in proper time, the name of the committee and the names of its members shall be printed as above indicated, with a statement that the committee failed to send in its report, and the Council, subject to the approval of the House of Delegates, shall be empowered under such conditions to make such changes in the personnel of the committee as in its judgment may be deemed best.

Section 22.—Additional Committees

The House of Delegates and the Council are authorized and empowered to appoint special committees, with special instructions as to work to be undertaken, whenever it is deemed impractical or improper for the contemplated duties to be performed by a standing committee.

CHAPTER VIII.—ELECTION OF OFFICERS: TERMS

Section 1.—President-Elect—When and How Elected: Term of Office

The House of Delegates at each Annual Session thereof shall elect the President-Elect to serve until the adjournment of the final meeting of the House of Delegates at its next Annual Session. At the conclusion of the final meeting of the House of Delegates at its next Annual Session, such President-Elect shall assume the office of President, and serve as such for the term of one year thereafter, or until his successor assumes office.

Section 2.—Speaker and Vice-Speaker of House—When Elected: Term of Office

The House of Delegates shall at the Annual Session thereof elect a Speaker of the House of Delegates and a Vice-Speaker of the House of Delegates, each to serve for the term of one year, or until their successors are elected and assume office. The Speaker and Vice-Speaker shall be members of the House of Delegates at the time of their election.

Section 3.—Delegates to the American Medical Association

The House of Delegates shall elect delegates and alternates to the House of Delegates of the American Medical Association in accordance with the Constitution and By-Laws of that organization.

Section 4.—Officers Elected by House of Delegates

Those officers who under the Constitution are elected by the House of Delegates shall be elected at the second meeting of the House at the Annual Session thereof.

Section 5.—Election of Ballot: Number of Votes Necessary

(a) All elections of officers shall be by ballot; provided, that by a two-thirds vote of the members present and acting election by ballot may be waived.

(b) A majority of the votes cast shall be necessary to elect any officer.

(c) In case no nominee receives a majority of the votes on the first ballot the nominee receiving the lowest number of votes shall be dropped and a new ballot taken. This procedure shall be continued until one of the nominees receives a majority of all the votes cast, when he shall be declared elected.

Section 6.—Election of District Councilors

At least twenty-four hours prior to the second meeting at each annual session of the House of Delegates the delegates from those districts in which Councilor vacancies are about to occur shall separately meet, and in each district the delegates shall elect a chairman and a secretary. At such caucus the delegates in each district shall by nomination, secret ballot and majority vote of the delegates present elect a district Councilor from such district to serve for the ensuing term. The chairman of the district delegation shall then report at the second meeting of the House of Delegates the results of the election, and when such report is made the member elected shall thereupon assume office as a district Councilor. The time and place of the caucus of each district delegation shall, in the absence of unanimous written consent by the delegates from the district fixing time and place, be fixed by the Speaker and announced at the first meeting of the House of Delegates at each annual session. In the event that at any district caucus no person receives a majority vote for district Councilor after repeated ballots, the chairman of the caucus shall report such fact at the second meeting of the House of Delegates and shall also report the names of all nominees submitted to the caucus, whereupon the House of Delegates shall proceed to elect from such nominees the district Councilor from such district.

Section 7.—When Terms of Office of Speaker, Vice-Speaker and Councilors Begin

The terms of office of the Speaker and Vice-Speaker of the House of Delegates (which terms are herein generally stated to be one year) and the terms of office of the Councilors (which terms are herein generally stated to be three years) shall commence immediately upon the adjournment of the last meeting of the House of Delegates of the Annual Session of the Association at which such officers are elected, and shall continue up to the adjournment of the last meeting of the House of Delegates at the Annual Session of the Association of the year in which the term of office ends.

Section 8.—Officers to Hold Office Until Successors Are Elected and Assume Office

Every officer shall hold office until his successor has been elected and has assumed office either in person or by announcement.

Section 9.—Vacancies in Office

(a) In case of vacancy in the offices of both President and President-Elect, the chairman of the Council shall act as the Acting President until a President is elected at the next Annual Session of the House of Delegates.

(b) The Council by appointment shall fill any vacancy in office not otherwise provided for in the Constitution or these By-Laws, which occurs during the interval between the Annual Sessions of the House of Delegates. Such appointee shall serve until the next Annual Session and until his successor has been elected and has assumed office.

CHAPTER IX.—POWERS AND DUTIES OF OFFICERS

Section 1.—Duties of the President

The President shall preside at all meetings of the Association.

He shall appoint all committees not otherwise provided for; he shall deliver an address at the regular session at such time as may be arranged, and shall perform such other duties as custom and parliamentary usage may require, or as the House of Delegates or the Council may direct.

He shall be the real head of the profession of the state during his term of office, and, as far as practicable, shall visit, by appointment, the various sections of the state and assist the Councilors in building up the component societies, and in making their work more practical and useful. The Council shall decide what portion of the expenses incurred on his official visits shall be paid by the Association.

He shall be ex officio a member of all committees of the Association.

Section 2.—Duties of the Secretary-Treasurer, Executive Secretary and Field Representatives

The duties of the Executive Secretary and Field Representatives may be such as are delegated to them by the Council, and may be any and all duties as are specified under the various provisions of this section.

(a) *Minutes.* The Secretary-Treasurer (who may also be referred to as Secretary or Treasurer) shall attend the general meetings of the Association, the meetings of the House of Delegates, of the Council and of the Executive Committee, and shall keep minutes of their respective proceedings in separate record books.

(b) *Custodian of Records.* He shall be custodian of all record books and papers belonging to the Association. He shall have the custody of the seal of the Association.

(c) *Contracts.* He shall countersign all contracts, agreements, conveyances, transfers or other instruments to which the Association is a party, the execution of which has been authorized by the House of Delegates or Council.

(d) *Checks.* The Secretary-Treasurer shall sign and issue checks or drafts only upon vouchers approved and signed by at least two of the members of the Auditing Committee or as otherwise provided.

(e) *Advertisements in Association Publications.* The Secretary-Treasurer, subject to instructions by the Council, shall carefully examine, approve, modify or reject all material for advertising in any of the publications of the Association, and shall, in all cases of doubt, refer such proposed advertisements to the Executive Committee or the Council for decision. He shall, with the approval of the Council or the Executive Committee, execute, for the Association, written contracts relating to advertising in the form approved by the Council, subject to instructions by the Council.

(f) *Registrar at Annual Sessions.* He shall provide for the registration of the members and delegates at the Annual Session.

(g) *Index Register of California Medical Licentiate.* He shall, with the cooperation of the secretaries of the component societies, keep a card-index register of all the licensed practitioners of the state by counties, noting the status of each in relation to his component society; and shall transmit a copy of this list to the American Medical Association, transmitting to its secretary each month a report containing the names of new members and the names of those dropped from the membership roster during the preceding month.

(h) *Register of Component Societies, Their Members and Officers.* He shall keep a register of all component societies, their respective officers, and of all members of the Association, with their addresses. He shall print in the January or February issue of the official journal the number of active members of each component society as of November 1st of the preceding year.

(i) *Notices.* He shall give all notices required by the Constitution and By-Laws of this Association, or by order of the Council, or of the Executive Committee, or by law.

(j) *Correspondence and Notifications to Committees.* He shall conduct the official correspondence, promptly notifying members of meetings, officers of their election, and committees of their appointment and duties, as outlined in the motions creating such committees. Such notifications shall be made in writing.

(k) *Assistants.* He shall employ and dispense with such assistants as may be ordered by the Council. The Council by resolution may outline the scope and duties of special employees acting under the Secretary-Treasurer.

(l) *Annual and Other Report Forms.* He shall supply all component societies with the necessary forms for making their annual and other reports to this Association.

(m) *Salary.* The amount of his salary shall be fixed by the Council.

(n) *Bond.* He shall give bond in such sum as may be fixed by the Council. The Association shall pay the premium on said bond.

(o) *Duties as Treasurer.* He shall as Treasurer demand and receive all funds due the Association, together with bequests and donations, and shall promptly deposit the same in one of the depositories thereof; and shall keep a proper and accurate record thereof, as well as of all funds disbursed by the Association.

(p) *Audits and Reports.* He shall subject his accounts to such examination or audit as the House of Delegates or Council may order.

He shall annually render an account of his work, and of the state of the funds in his hands, and make a report on the same and of his work as Secretary-Treasurer to the House of Delegates. He shall in writing also make such other reports as the House of Delegates or Council may request.

(q) *Disbursement of Association Moneys.* He shall pay out the money of the Association only upon a check or draft as otherwise provided herein.

(r) *Other Duties.* He shall perform such other duties as the Council or Executive Committee may direct.

Section 3.—Duties and Powers of the Chairman of the Council

The Chairman of the Council shall preside at all meetings of the Council. He shall sign all contracts and agreements, conveyances, transfers or other instruments (other than advertising contracts) to which the Association is a party, the execution of which has been authorized by the House of Delegates or the Council. He shall sign all checks or drafts for the disbursements of funds of the Association. He shall, on behalf of the Council, deliver its report to each session of the House of Delegates. He shall perform such other duties as may be imposed upon him by the Constitution or these By-Laws.

Section 4.—Duties of Vice-Chairman of the Council

The Vice-Chairman of the Council, in the absence or inability of the Chairman to act, shall be vested with all the powers and shall perform all the duties of the Chairman.

Section 5.—Duties and Powers of the Speaker

The Speaker of the House of Delegates shall preside at its meetings and shall perform such other duties as parliamentary usage may require. He shall appoint all committees authorized by the House of Delegates, unless otherwise provided.

Section 6.—Duties of Vice-Speaker

The Vice-Speaker shall act as Speaker in the absence of or at the request of the Speaker.

Section 7.—Duties of the Editor

The Editor and Associate Editor or Editors shall compile, edit and have charge of the official journal of the Association and such other publications as the Council or the House of Delegates may instruct him to undertake.

CHAPTER X.—FUNDS, PROPERTY, BUDGET AND ASSESSMENTS**Section 1.—Preparation of Budget**

The Auditing Committee, prior to December 1 of any year, shall submit to the Executive Committee, for consideration at its December meeting, a budget under which the Association shall work in the fiscal year following the next annual session.

The Executive Committee, after consideration of the Auditing Committee's proposed budget, shall submit the same to the Council, prior to the spring meeting of the Council, with a report of its own containing suggested changes, additions or comments.

The Council in turn shall consider the two proposed budgets so submitted, and shall then make a final draft of a proposed budget for the Association, to be submitted to the House of Delegates at the next annual session.

Section 2.—Dues

(a) The Council shall recommend to the House of Delegates the amount of the annual dues or assessments of Active, Associate, Affiliate and Retired members of the Association.

(b) Honorary Members shall not be required to pay any dues or assessments, annual or special.

Section 3.—Reduction of Dues

The House of Delegates may reduce annual dues of active members, as follows:

(a) Those active members who have been in the practice of medicine for less than one year (on the first day of the calendar year for which such dues are payable), may be reduced to one-fourth regular dues;

(b) Those active members who have been in the practice of medicine for less than two years (on the first day of the calendar year for which such dues are payable), may be reduced to one-half regular dues;

(c) Those active members who have been in the practice of medicine for less than three years (on the first day of the calendar year for which such dues are payable), may be reduced to three-fourths regular dues.

Section 4.—Annual Dues and Assessments

(a) *When Payable.* The annual assessment or dues shall be payable on or before January 1 of the year for which they are levied.

(b) *County Secretaries to Collect Dues.* The secretary of each component society shall cause to be collected and shall forward to the office of the Association the dues and assessments for its members, including the annual dues and assessments for the American Medical Association.

(c) *Record of Fact of Payment of Dues.* The record of payment of dues and assessments on file in the office of the Association shall be final as to the fact of payment by a member and as to his right to participate in the business and proceedings of the Association and of the House of Delegates.

(d) *Dues of New Members; Amount Payable.* All doctors of medicine becoming active members of this Association shall pay to this Association the annual dues payable by active members for the period for which membership is obtained, except that the Council may, in its discretion, with respect to all new members who acquire membership after July 1 in each year, require payment of only one-half of the annual dues for said year. Such payment shall entitle such new member to all the rights of active membership in this Association until the end of the current calendar year.

Section 5.—Bequests, Legacies, Donations and Gifts

The Association may receive through the Council or for the benefit of the Association through any corporation which may be formed pursuant to the Constitution, such bequests, legacies, donations and gifts as the Council shall deem it proper and suitable to accept.

Section 6.—Funds and Moneys: Deposit and Withdrawal

All funds and moneys of the Association by whomsoever received shall be promptly forwarded to the Secretary-Treasurer of the Association and deposited by him in a depository of the Association.

The Auditing Committee shall inspect all bills and no demands or claims against the Association shall be paid and no funds or moneys of the Association be withdrawn from any depository thereof except upon written approval of a majority of all the members of the Auditing Committee on check or draft signed by any two persons authorized by the Council, providing all such authorized signers are under bond.

Section 7.—Revolving Fund

A revolving fund in such amount as may from time to time be fixed by the Council shall be deposited with the Secretary-Treasurer from which fund immediate cash demands may be paid.

Section 8.—Surplus Funds From Journal and Publications

On authorization therefor by the House of Delegates or the Council, any surplus funds arising from the operation of the official journal or other publications of the Association may be applied and used for any purposes deemed suitable or may be delivered and paid over to any corporation which may be formed pursuant to Article VIII, Section 1, of the Constitution.

CHAPTER XI.—PUBLICATIONS**Section 1.—Scientific Journal**

The Association shall publish and distribute an official journal in the interest of the Association and of its members, devoted to the advancement of medical thought and science, to medical organization, and for the dissemination of medical and public health information.

Section 2.—Annual Directory

The Association may publish an annual directory of members, with such other information as the Council may direct.

Section 3.—Pre-Convention Bulletin

The Association, prior to the annual session, shall print a pre-convention bulletin, which shall contain reports of officers and committees; provided, that the Council shall have the right to delete or modify such reports, and provided further, that committees whose reports have been deleted or modified shall have the right to submit them to the House of Delegates in their original form if the committees so desire.

A copy of the pre-convention bulletin shall be given to each delegate and alternate, on or before registration.

CHAPTER XII.—REFERENDUM AND PETITION**Section 1.—Reference of Resolutions to Vote of Members**

The House of Delegates may at any time, by a majority vote of those present, refer any resolution or motion pending before it to all of the active members of the Association for their vote for or against such resolution or motion. The Council may, by a two-thirds vote of all of its members and at any time within thirty (30) days after action was taken, refer any resolution or motion adopted by the House of Delegates to all of the active members of the Association for their vote for or against such resolution or motion. In addition, the Council may at any time, by a two-thirds vote of all of its members, submit any resolution or motion pending before it to all of the active members of the Association for their vote for or against such resolution or motion.

Section 2.—Form of Referendum: Arguments

The body referring any resolution or motion to the active members of the Association may, in the motion of reference, determine the form of the question to be submitted. In the event the motion of reference does not determine the form of the question to be submitted, then the form thereof shall be fixed and determined by the Council. Written arguments for and against the resolution or motion, not exceeding 1000 words each, may be submitted by any member of the Association to the presiding officer of the referring body within fifteen (15) days of the vote of reference. Such presiding officer may choose one argument on each side and same shall then be printed and mailed with the ballots.

Section 3.—Manner of Voting; Time of Voting; Canvass

All references to the membership under this article shall be by mail ballot. The time within which each member shall cast his vote may be fixed in the motion of reference, and if not so fixed shall be fifteen days from the date of mailing ballots. Each vote must be in writing and the same must be placed in a sealed envelope bearing on the corner thereof the name of the voter. The envelope shall be mailed or delivered to the Secretary's office. The canvass thereof shall be made by a committee on referendums to be appointed, in the case of reference by the House of Delegates by the Speaker of the House, and in the case of reference by the Council by the Chairman of the Council. The Secretary shall deliver to such committee all ballots timely received, and the committee shall canvass the vote and report the results thereof immediately to the Secretary.

Section 4.—Effect of Referendum

To be considered adopted, any resolution or motion submitted to the membership by referendum shall require the same proportionate affirmative vote of those voting that such resolution or motion would have required to be adopted by the body (House of Delegates or Council) from which such resolution or motion was referred. Any resolution or motion submitted to a referendum and adopted shall have the same force and effect as though adopted in the body from which it was referred, and shall be considered as having been so adopted by such body. A referendum shall not be effective or binding unless a majority of the active members vote thereon.

Section 5.—Petitions

Any 100 active members or any component society may petition the House of Delegates or Council on any matter and such petition must thereupon be heard and considered at the next ensuing regular meeting of such body.

CHAPTER XIII.—MISCELLANEOUS**Section 1.—Ethics**

The principles of medical ethics as promulgated from time to time by the American Medical Association and by the California Medical Association are and shall be the principles of medical ethics of this Association and the component societies thereof, and shall regulate and govern all members thereof.

Interpretation of ethics about which any controversy may arise or exist shall be submitted to the Council of this Association, and its interpretation and ruling thereon shall be final.

Section 2.—Rules of Order

In the absence of any provision in the Constitution or these By-Laws, all meetings of the Association, of the House of Delegates, of the Council, and of committees shall be governed by the parliamentary rules and usages contained in the current edition of Robert's "Rules of Order."

Section 3.—Oath of Office

All officers and employees of the Association, upon election or appointment, shall subscribe to an oath or affirmation as follows: "I do not belong and have not belonged to any organization advocating the overthrow or change of the form of government of the U. S. A. by violent or unlawful means, nor do I belong or have belonged to any organization while it was listed, published or held to be subversive by the Department of Justice of the United States of America." If, after full hearing, the Council shall find that an officer or employee falsely subscribed to the oath or affirmation, it may in its discretion remove the officer or employee from his office or position and fill the vacancy so created.

CHAPTER XIV.—AMENDMENTS**Section 1.—Amendments—Vote and Procedure**

These By-Laws may be amended by the House of Delegates at any meeting of any session thereof by the affirmative vote of at least two-thirds of the qualified members thereof present and acting; provided, that any proposed amendment has been submitted in writing to the House of Delegates at least twenty-four hours previous to being voted upon.

CHAPTER XV.—REPEAL OF ALL EXISTING BY-LAWS**Section 1.—Repeal of Existing By-Laws**

All chapters and all sections of the existing By-Laws of this Association are hereby repealed, except that at the session of the House of Delegates at which these By-Laws, as a whole, are adopted, all chapters and all sections of the By-Laws in effect immediately prior to said adoption relating to the House of Delegates or to its composition and membership, or to delegates and alternates, shall remain in effect until final adjournment of such session and in addition, all resolutions or other business pending before the House of Delegates at the time of the adoption of these By-Laws shall remain before it and may be acted upon as provided in said prior By-Laws, and, except that at any session, regular or special, of the House of Delegates held in the same calendar year in which these By-Laws, as a whole, are adopted, the House of Delegates shall consist of the number of delegates provided in the prior By-Laws or in the Constitution of the Association in effect on January 1, 1951. All delegates and alternates elected to such office prior to May 12, 1951, shall continue to hold such office, regardless of the provisions of these By-Laws, until December 31, 1951.

In Memoriam

ANTON, FRANCIS L. Died at Los Angeles, July 30, 1951, aged 75, of coronary artery disease. Graduate of the University of Southern California School of Medicine, Los Angeles, 1899. Licensed in California in 1899. Dr. Anton was a member of the Los Angeles County Medical Association, a life member of the California Medical Association, and a Fellow of the American Medical Association.

BUMGARNER, JOHN W. Died at Calistoga, July 4, 1951, aged 52, of coronary artery disease. Graduate of the University of California Medical School, Berkeley-San Francisco, 1925. Licensed in California in 1925. Dr. Bumgarner was a retired member of the Alameda-Contra Costa Medical Association, the California Medical Association, and a Fellow of the American Medical Association.

CAMPBELL, ROY. Died at Los Angeles, July 29, 1951, aged 56. Graduate of the College of Physicians and Surgeons, Los Angeles, 1922. Licensed in California in 1928. Dr. Campbell was a member of the Los Angeles County Medical Association, the California Medical Association, and a Fellow of the American Medical Association.

CRUMRINE, RALPH M. Died at Los Angeles, July 11, 1951, aged 60. Graduate of Harvard Medical School, Boston, 1925. Licensed in California in 1927. Dr. Crumrine was a member of the Los Angeles County Medical Association, the California Medical Association, and a Fellow of the American Medical Association.

FLETCHER, HAROLD A. Died at Kentfield, July 26, 1951, aged 63, of coronary artery disease. Graduate of Stanford University School of Medicine, Stanford University-San Francisco, 1916. Licensed in California in 1916. Dr. Fletcher was a member of the Marin County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

FRIESEN, HENRY J. Died at Glendale, July 6, 1951, aged 71, of ventricular fibrillation. Graduate of Northwestern University Medical School, Chicago, 1910. Licensed in California in 1922. Dr. Friesen was a member of the Los Angeles County Medical Association, the California Medical Association, and a Fellow of the American Medical Association.

GOLDSTEIN, JOSEPH. Died at Los Angeles, June 28, 1951, aged 56, of coronary artery disease. Graduate of Stanford University School of Medicine, Stanford University-San Francisco, 1923. Licensed in California in 1923. Dr. Goldstein was a member of the Los Angeles County Medical Association, the California Medical Association, and a Fellow of the American Medical Association.

GOLITZIN, ALEXANDER V. Died at Los Angeles, May 4, 1951, aged 75, after a long illness. Graduate of the First Moscow Medical Institute, Moscow, R.S.F.S.R., 1901. Licensed in California in 1928. Dr. Golitzin was a retired member of the Los Angeles County Medical Association, the California Medical Association, and a Fellow of the American Medical Association.

HILLARD, CARLOS G. Died at Redlands, July 21, 1951, aged 74. Graduate of Yale University School of Medicine, New Haven, 1904. Licensed in California in 1910. Dr. Hillard was a retired member of the San Bernardino County Medical Society, the California Medical Association, and an Associate Fellow of the American Medical Association.

IGO-FLITCROFT, LOUISE M. Died at Sacramento, June 9, 1951, aged 80. Graduate of the University of Southern California School of Medicine, Los Angeles, 1906. Licensed in California in 1907. Dr. Igo-Flitcroft was a member of the Sacramento Society for Medical Improvement, the California Medical Association, and the American Medical Association.

LIEN, FRED O. Died at Merced, June 23, 1951, aged 64, of cancer of the colon. Graduate of the University of Illinois College of Medicine, Chicago, 1914. Licensed in California in 1914. Dr. Lien was a member of the Merced County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

MACE, LEWIS S. Died at Los Gatos, July 14, 1951, aged 80, after a long illness. Graduate of the New York University College of Medicine, New York, 1899. Licensed in California in 1899. Dr. Mace was a retired member of the San Francisco Medical Society, the California Medical Association, and an Associate Fellow of the American Medical Association.

PEAKE, WILLIAM M. Died at Long Beach, June 29, 1951, aged 45. Graduate of the University of Colorado School of Medicine, Denver, 1930. Licensed in California in 1945. Dr. Peake was a member of the Los Angeles County Medical Association, the California Medical Association, and the American Medical Association.

SCOTT, ROBERT M. Died near Upper Lake, August 1, 1951, aged 32, in an airplane crash. Graduate of Washington University School of Medicine, St. Louis, Mo., 1944. Licensed in California in 1948. Dr. Scott was a member of the Sacramento Society for Medical Improvement, the California Medical Association, and the American Medical Association.

SMITH, WESLEY S. Died at Glendale, July 22, 1951, aged 43, after a prolonged illness. Graduate of the College of Medical Evangelists, Loma Linda-Los Angeles, 1933. Licensed in California in 1933. Dr. Smith was a member of the San Diego County Medical Society, the California Medical Association, and a Fellow of the American Medical Association.

Questions and Answers about C. P. S.

Question: Does the two-visit-deductible medical contract ever cover family dependents?

Answer: No, because this type of coverage is limited to the employee member.

There is the possibility, however, of a husband and wife both having two-visit-deductible medical coverage if both are employed and if each belongs to a C.P.S. group where each is employed.

Question: If the Medical Policy Committee or the C.P.S. Medical Director decides that an increased fee should be paid, how long on the average is required for the physicians' office to receive the adjusted payment?

Answer: The physician may normally expect the adjusted payment to be made on his next monthly payment from C.P.S. following the date of the adjustment.

Question: What is the procedure for joining C.P.S. as a physician member?

Answer: Any doctor of medicine *residing and licensed to practice in California* as a physician and surgeon may apply for physician membership in C.P.S. Application forms will be supplied upon request to any C.P.S. office. The application requires about two weeks for processing. The new member is provided with a C.P.S. physician membership certificate.

There is no requirement of a minimum period of residence in California, but in order to participate in the Veterans Program the physician must be a citizen. There is no registration fee.

Question: If I need immediate clarification on a C.P.S. member's coverage, how can I best obtain it?

Answer: If the physician's office is in Los Angeles, there are several direct lines to the medical department which C.P.S. maintains for the exclusive use of physicians. These numbers are: WEBster 3-8150, WEBster 3-8157, WEBster 3-8158, WEBster 3-8159.

Direct lines also are maintained in San Francisco. These numbers are: YUKon 6-5270, YUKon 6-5271, YUKon 6-5272, YUKon 6-5273.

In other areas, physicians should telephone the physician relations representative in the nearest C.P.S. district office, who will take all necessary information and relay it to the medical department for immediate action.

Question: Under the new C.P.S. contracts, are the \$25.00 x-ray and \$10.00 laboratory provisions renewable yearly for the same diagnosis?

Answer: Yes. The full amounts of these provisions are renewed each year, regardless of the conditions for which they are utilized.

Question: Does the C.P.S. payment to the physician for maternity services depend upon whether the patient's contract covers two or more persons?

Answer: No. It is only required that the patient is a C.P.S. member in good standing (dues paid) and that membership has been maintained for nine consecutive months under the new two-visit-deductible medical contract—or ten consecutive months under the old two-visit-deductible contract.

Question: Does C.P.S. ever pay for drugs and medications administered in the physician's office?

Answer: No. There are various drug provisions under different C.P.S. contracts, but all of them apply only when the member is hospitalized.

Question: Most of the authorizations I receive for treatment of veterans are for one month; but sometimes the authorizations cover part of one month and all of the next month. Why is this?

Answer: When a physician's request for authorization is received after the 15th of the month, the Veterans Administration realizes that, by the time it has been processed and mailed back to him, it will be too late for the physician to request authorization for the next month's treatment. In such cases, therefore, the VA issues an authorization covering the balance of the current month and all of the following month.

Question: After having received my first authorization for treating a veteran patient under the Home Town Care Program, how do I obtain authorizations for succeeding months?

Answer: C.P.S. mails Form 53C to physicians about the 15th of the month. These forms, besides serving as a reminder that reauthorizations should be requested in cases where continued treatment is necessary, provide a simple means for physicians to make the requests.

If Form 53C is not received or is lost, reauthorization may be obtained by writing or telephoning to the C.P.S. office (in San Francisco, Los Angeles or San Diego) before the end of the month covered by the previous authorization.

Physicians should keep in mind that these forms must be signed by them. C.P.S. cannot obtain authorization (or reauthorization) of treatment without the physician's signature. Finally, physicians or their secretaries should check incoming authorizations at the first of each month to be certain that requested authorizations (or reauthorizations) are on hand. If not, C.P.S. should be contacted immediately.

NEWS and NOTES

NATIONAL • STATE • COUNTY

FRESNO

The second annual session of the San Joaquin Valley Medical and Surgical Institute will be held in Fresno, Thursday and Friday, October 4 and 5, 1951.

The program follows:

THURSDAY, OCTOBER 4

- 8:00-9:00 a.m.—Registration: Mezzanine Floor, Hotel Californian.
Chairman of morning session, Thomas A. Collins, M.D.
- 9:30-10:30 a.m.—The Differentiation of Organic and Functional Complaints—Paul A. Giebe, M.D., assistant professor of psychiatry, University of California School of Medicine.
- 10:30-11:30 a.m.—Essential Office Laboratory Procedures—Marcus Krupp, M.D., director, Palo Alto Medical Research Foundation and assistant clinical professor of medicine, Stanford University.
- 11:30 a.m.-12:30 p.m.—Current Concepts in Diagnosis and Treatment of Rheumatic States—Hilliard J. Katz, M.D., instructor in internal medicine at University of California Medical School.
- 12:30-2:00 p.m.—Luncheon and Round Table Discussion at Hotel Californian—Doctors Giebe, Krupp and Katz participating; Frank W. Bailey, M.D., chairman.
Chairman of afternoon session, C. S. Mitchell, M.D.
- 2:00-3:30 p.m.—Practical Means of Fluid Balance Maintenance in Disease—Marcus Krupp, M.D.
- 3:30-5:00 p.m.—Obliterative Diseases of Blood Vessels—Edwin J. Wylie, M.D., instructor in surgery, University of California.
- 6:30-10:30 p.m.—Dinner, Hotel Californian. Speaker: Paul A. Giebe, M.D.—Chronic Alcoholism.
Chairman of dinner meeting—Hugh Awtrey, M.D.

FRIDAY, OCTOBER 5

- Chairman of morning session, Russell A. Donald, M.D.
- 9:00-10:00 a.m.—Treatment of Burns—Louis F. Ellmore, M.D., assistant clinical professor of surgery, University of Southern California; chief of burns service, University of Southern California Division, Los Angeles County Hospital.
- 10:00-11:00 a.m.—Injuries of the Abdominal Viscera—Orville Grimes, M.D., assistant professor surgery, University of California.
- 11:00-12:00 noon—Common Infections of the Ear, Nose and Throat—Lewis F. Morrison, M.D., clinical professor, department of otorhinolaryngology, University of California Medical School, San Francisco.
- 12:15-1:45 p.m.—Luncheon and Round Table Discussion at Hotel Californian—Doctors Ellmore, Grimes and Morrison participating; James J. Kelley, M.D., chairman.
Chairman afternoon session, Allen Turk, M.D.
- 2:00-3:00 p.m.—Recent Developments in Office Gynecologic Treatment—Edmund W. Overstreet, M.D., assistant professor of gynecology and obstetrics, University of California.

3:00-4:00 p.m.—Differential Diagnosis of Urological Signs and Symptoms—Donald R. Smith, M.D., assistant clinical professor, urology, University of California School of Medicine.

4:00-5:00 p.m.—Newer Approaches to the Management of Certain Obstetrical Complications—Edmund W. Overstreet, M.D.

LOS ANGELES

Dr. John Field II, professor of physiology in the Medical School on the Los Angeles campus of the University of California, has been granted a leave of absence to serve as assistant director for biological services of the newly created National Science Foundation in Washington, D. C. He will be one of four assistant directors in charge of major fields of research.

Dr. George M. Uhl, Los Angeles City Health Officer, recently announced assignment of three physicians to department posts. **Dr. George F. Schmelzel**, district health officer of West Los Angeles District for the past eight years, was assigned the duties of district health officer for Southwest District, with headquarters at 1126 West Vernon Avenue. **Dr. Byron O. Mork** was assigned as district health officer to West Los Angeles, Venice-Westchester District, with administrative headquarters in the West Los Angeles City Hall, 1620 Purdue Avenue. **Dr. Richard W. Lewis**, in addition to other duties, was temporarily assigned as acting district health officer of Hollywood District, headquarters at 1456 North Bronson.

SAN FRANCISCO

Dr. David A. Wood, formerly associate professor of pathology, Stanford University School of Medicine, was appointed director of the Cancer Research Institute in the University of California School of Medicine, San Francisco, effective September 1. **Dr. Robert S. Stone**, professor of radiology in the U. C. School of Medicine, has been acting director of the Institute.

Dr. Wood was secretary of the Cancer Commission of the California Medical Association from 1945 to 1951, and he held a similar post with the California Division of the American Cancer Society from 1945 to 1949. He is a professional director of the American Cancer Society for Region IV.

GENERAL

Plans for the second annual series of regional medical and surgical institutes, to be held in 1951-52, have been announced by the Committee on Postgraduate Activities of the California Medical Association. The programs have been carefully planned by a local committee representative of the counties in each region and by the directors of postgraduate activities from the medical schools supplying the faculty, so that they will not only be stimulating and useful to the attending physicians but will also furnish credit hours accept-

able to such groups as the American Academy of General Practice. Five two-day meetings will be held as follows:

October 4 and 5, 1951, at **Fresno**: San Joaquin Valley Counties Regional Medical and Surgical Institute. Teaching staff under supervision of University of California School of Medicine at San Francisco.

October 25 and 26, 1951, at **Santa Barbara**: West Coast Counties Regional Medical and Surgical Institute. Teaching staff under supervision of University of Southern California School of Medicine, Los Angeles.

January 17 and 18, 1952, at **San Bernardino**: Southern Counties Regional Medical and Surgical Institute. Teaching staff under supervision of University of California at Los Angeles School of Medicine.

February 14 and 15, 1952, at **Santa Rosa**: North Coast Counties Regional Medical and Surgical Institute. Teaching staff under supervision of Stanford University School of Medicine.

April 3 and 4, 1952, at **Sacramento**: Sacramento Valley Counties Regional Medical and Surgical Institute. Teaching staff under supervision of College of Medical Evangelists, Los Angeles.

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The California Division of the American Cancer Society will hold its fifth annual conference Friday and Saturday, September 28 and 29, at the Clift Hotel, San Francisco.

W. Edward Chamberlain, M.D., professor of radiology, Temple University, and visiting professor of oncology, University of California, will deliver the principal address at a dinner meeting at 7 p.m., Friday.

The preliminary program for the meeting follows:

FRIDAY, SEPTEMBER 28

9:00-9:45 a.m.—Registration.

9:45-10:10 a.m.—Opening session—Mr. F. M. McAuliffe, president, California Division, presiding. Greetings and announcements.

10:10-10:40 a.m.—Immediate Direction of Cancer Control—Ian Macdonald, M.D., associate professor of surgery, University of Southern California.

Intermission.

10:50-12:00 noon—County Branch Round Tables (Counties will convene, separately by groups—Class I, Class II and Class III).

12:15-1:45 p.m.—Luncheon.

2:00-4:30 p.m.—County Branch Round Tables (Continuation of morning groups).

6:00 p.m.—Refreshments.

7:00 p.m.—Annual Dinner Meeting—Dr. E. M. Butt, chairman, executive committee, California Division, presiding. Concerning a Particularly Significant Finding in Cancer Research—W. Edward Chamberlain, M.D., professor of radiology, Temple University; visiting professor of oncology, University of California.

SATURDAY, SEPTEMBER 29

9:00-9:45 a.m.—Summary of County Branch Round Tables by chairmen of round table groups.

10:00 a.m.—Annual Meeting of Members—Mr. F. M. McAuliffe presiding.

11:30 a.m.—Board of Directors—Organization meeting.

* * *

Postgraduate symposia on heart disease will be held next month in San Diego, Los Angeles and San Francisco by the respective County Heart Associations.

The San Diego County Heart Association will present its first annual postgraduate symposium October 15, 1951. The Los Angeles County Heart Association will hold its twenty-first annual symposium October 17 and 18 in the Wilshire-Ebell Theatre, and the San Francisco Heart Association will hold its twenty-second, October 24 to 27, in the Colonial Ballroom, St. Francis Hotel, and at the San Francisco Hospital.

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Dr. Travis Winsor of Los Angeles and Dr. Norman Freeman of San Francisco will be guest speakers at the Third Annual Symposium of the **Washington Heart Association** to be held October 19 to 20 in the University of Washington Medical School Auditorium, Seattle. Fields to be covered in the symposium are "Diagnosis and Therapy of Peripheral Vascular Disease" and "Surgical Treatment of Mitral Stenosis." Guest speakers on the latter subject are Dr. Robert P. Glover and Dr. O. Henry Janton, both of Philadelphia.

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Formulation of a **Bureau of Clinical Laboratory Standards** to supply highly standardized, accurate chemical solutions to its members for chemical determinations performed on body fluids has been announced by the College of American Pathologists. The purpose is to promote greater accuracy and uniformity of results by providing pathologists who do not have access to reliable materials and technical assistance with standardized solutions against which to compare solutions used in local laboratories.

The college has asked all members who direct or are responsible for clinical pathology to submit requests for the first distribution of standard solutions—three containers of dextrose standard and three of a nitrogen standard—which will be sent without charge. Requests should be addressed: College of American Pathologists, 203 North Wabash Avenue, Chicago 1, Illinois.

* * *

Dr. Hugh H. Hussey, associate professor of medicine at Georgetown University, Washington, D. C., has been appointed associate editor of **GP**, published by the American Academy of General Practice. In announcing the appointment, Mac F. Cahal, managing publisher, pointed out that the rapid growth of the publication during the past year and a half has thrown a steadily increasing burden on the medical director, Dr. Walter C. Alvarez.

* * *

The National Gastroenterological Association will hold its Sixteenth Annual Convention and Scientific Sessions at the Drake Hotel in Chicago, September 17 to 19, 1951.

Immediately following the convention, on September 20, 21 and 22, 1951, the association will conduct a course in postgraduate gastroenterology at the Drake under the direction of Drs. O. H. Wangenstein, Minneapolis, and I. Snapper, New York.

Further information concerning the program and details of the course may be obtained by writing to the Secretary, National Gastroenterological Association, 1819 Broadway, New York 23, N. Y.

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Appointment of Dr. Wilton L. Halverson, director of the California State Department of Public Health, to head a special joint survey to evaluate the health and sanitation programs of 17 Central and South American countries was announced last month by Dr. Leonard A. Scheele, Surgeon General of the U. S. Public Health Service. Dr. Halverson has been given a six-month leave of absence from his California post, and Dr. Malcolm H. Merrill has been appointed acting director.

POSTGRADUATE EDUCATION NOTICES

UNIVERSITY OF CALIFORNIA SCHOOL OF MEDICINE—Medical Extension, Toland Hall, U. C. Hospital, San Francisco

Evening Symposia in Medicine:

Sept. 17-Dec. 17 (every Monday evening).

This is a series of evening exercises for general practitioners in the form of symposia on topics of particular interest to them. Fee: \$60.00.

Contact: Stacy R. Mettier, M.D., Medical Extension, U. C. Medical Center, San Francisco 22.

UNIVERSITY OF CALIFORNIA SCHOOL OF MEDICINE, Medical Extension, Los Angeles

THERAPY OF METABOLIC AND ENDOCRINE DISORDERS—855EF. Sept. 19-Dec. 28, 1951. Fee \$50.00.

Meeting place: Room 113, General Medical and Surgical Hospital (Wadsworth), Wilshire and Sawtelle Boulevards, Los Angeles.

Application or requests for information concerning this course should be made to: Office of Medical Extension, University Extension, University of California, Los Angeles 24, California.

Guest Lecturers: Dr. John P. Peters, John Slade Ely professor of medicine, School of Medicine, Yale University, will deliver the initial lecture, "Salt and Water Metabolism in Health and Disease." Other lecturers include: Dr. John W. Gofman, clinical instructor in medicine, Donner Laboratory, University of California; Dr. Gilbert S. Gordan, instructor in medicine and pharmacology, University of California Medical School, San Francisco; Dr. Dickinson W. Richards, Jr., director, First Medical Division, Bellevue Hospital, New York City; Dr. John Douglas Robertson, director, Department of Clinical Investigation, The London Clinic, London, England; Dr. H. Clare Shepardson, associate clinical professor of medicine, University of California Medical School, and Dr. Howard B. Sprague, instructor in medicine, Harvard Medical School.

OBSTETRICS AND GYNECOLOGY. October 17, 18 and 19—Intensive three-day course, 9:30 a.m. to 5:00 p.m. daily, School of Medicine, Los Angeles campus.

RECENT ADVANCES IN GENERAL SURGERY. Nov. 13-Feb. 11, 1952, 12 weekly evening lectures.

Guest Lecturers: Dr. Frank Glenn, Cornell University School of Medicine; Dr. Robert Elman, Washington University, St. Louis; Dr. Warren Cole, University of Illinois.

Contact: University of California Extension, Office of Medical Extension, Los Angeles 24.

MEDICAL STENOGRAPHY AND MEDICAL OFFICE PROCEDURES. Sept. 21 and 22 consecutive Friday meetings from 6:30 to 9:00 p.m. Extension Center, 813 S. Hill Street, Room 304.

UNIVERSITY OF SOUTHERN CALIFORNIA SCHOOL OF MEDICINE.

Full-Time Courses Beginning Sept. 17:

INTERNAL MEDICINE 830. Tuition \$1,000. 12 months. Starr, Petit and staff.

CARDIOLOGY AND VASCULAR DISEASE 832. Tuition \$1,000. 12 months. Griffith, Cosby and staff.

GASTROENTEROLOGY 844. Tuition \$1,000. 12 months. Wharton and staff.

DERMATOLOGY AND SYPHILOLOGY 860. Tuition \$1,000, 12 months. Obermayer and staff.

Many of the lectures in Internal Medicine 830 are open to physicians not enrolled in the full-time course.

Evening Courses:

Los Angeles (County Hospital). 834, ELECTROCARDIOGRAPHY. Sept. 17. Travis Winsor, M.D., 12 two-hour evening lectures. \$50.00.

Los Angeles (Cintinela Hospital). 843, RECENT ADVANCES IN DIAGNOSIS AND TREATMENT. Sept. 13. Martin, Homann, Edmondson and staff. 12 two-hour evening lectures. \$50.00.

Santa Barbara and Ventura. 842, RECENT ADVANCES IN INTERNAL MEDICINE. Sept. 13, Cottage Hospital, Santa Barbara. Starr and staff. 12 two-hour evening lectures. \$50.00.

The following evening courses are available in any Southern California area where a sufficient number of physicians apply:

- 833, Cardiology
- 835, Theory of Electrocardiology, Advanced Course
- 836, Rheumatic Fever
- 837, Allergy
- 838, Hematology
- 839, Diagnostic Procedures in Cardiovascular Diseases
- 840, Pulmonary Diseases
- 846, Advanced Gastroenterology
- 847, Endocrinology
- 848, Diabetes Mellitus
- 849, Psychosomatic Medicine
- 850, Diseases of the Abdomen
- 854, Principles of Human Nutrition in Health and Disease (Open to Doctors of Dentistry)
- 863, Dermatology and Syphilology
- 865, Recent Advances in Pediatrics
- 869, Recent Advances in Surgery, Obstetrics and Gynecology
- 872, Recent Surgical Advances

For application and information, direct inquiries to Medical Extension Education, Box 158, Los Angeles County Hospital, 1200 No. State Street, Los Angeles 33, California, or call CA 1-2637 or CA 3131, Sta. 700.

INFORMATION

New Form for Reporting "Reportable" Diseases

New record forms have been distributed for use by physicians and agencies in making reports of cases of diseases which they are required to report to local health departments or to the State Health Department if there is no local health department. Simplification for quick reporting of communicable diseases is the purpose of the revision of these record forms, which include diagnostic and identifying information.

Preceding this revision, a review was made, item by item, of the information to be requested. This study, extending over almost two years, was made by a committee composed of personnel from several bureaus and services in the State Health Department, with consultation from other interested persons and agencies, including committees of the California Conference of Local Health Officers. The following criteria were used in the review: (1) To request only information essential to begin public health

action or increase epidemiologic knowledge. (2) To request information in such a way that it will be easier for physicians to supply it.

The new case record form, "Confidential Morbidity Report," will replace three separate forms previously used, one to report tuberculosis, one to report venereal diseases, and one for the rest of the reportable diseases and conditions. Prepaid postage envelopes are provided so that reports of all diseases remain confidential. Previously, envelopes were used for reporting only a few of the diseases upon which reports are required.

The record forms are supplied in pads convenient for carrying. Instructions for use are printed on the inside cover of the pad and are visible while the report is being completed. A list of the reportable diseases and conditions appears on the back cover. The last card in the pad is an order form to be used for requesting more morbidity report forms.

Card Form—25 cards in a book.

Printed Directions—Inside of front cover.

CONFIDENTIAL MORBIDITY REPORT SEND TO LOCAL HEALTH OFFICER			
PATIENT'S NAME—LAST, FIRST, MIDDLE		COLOR OR RACE	SEX
STREET OR RURAL ADDRESS		CITY OR TOWN	AGE
PRESENT ADDRESS			
STREET OR RURAL ADDRESS	CITY OR TOWN	COUNTY	DATE OF ONSET
DISEASE (IF GONORRHEA, SYPHILIS OR TUBERCULOSIS, GIVE DIAGNOSTIC DETAILS. SEE INSIDE FRONT COVER FOR INSTRUCTIONS.)		DATE OF DIAGNOSIS	
PERSON REPORTING (NAME AND ADDRESS)		IF REPORTED AFTER DEATH, DATE OF DEATH	
NAME OF HOSPITAL, INSTITUTION, SANATORIUM OR OTHER AGENCY REPORTING			
STATE OF CALIFORNIA		(15-1-51) FORM ACD-222 DEPARTMENT OF PUBLIC HEALTH	
FOR TUBERCULOSIS (ACTIVE OR PRESUMPTIVELY ACTIVE)			
CHECK IF FOUND BY SMALL X-RAY FILM	EXTENT OF PULMONARY TUBERCULOSIS: MINIMAL MODERATELY ADVANCED	TUBERCLE BACILLI FOUND? YES NO	IF YES, BY WHAT TEST? SNEAR CONCENTRATE SMEAR CULTURE ANIMAL INOCULATION
YEARS OF RESIDENCE IN CALIFORNIA			

GUIDE FOR COMPLETION OF "CONFIDENTIAL MORBIDITY REPORT"

Color or Race: Indicate White (including Mexican), Negro, Chinese, Japanese, or if other, specify.

Gonococcus Infection: If other than Genito-Urinary, specify type.

Syphilis: State the stage of infection using the following classifications:

Primary—Chancres present, serology negative or positive, no skin or mucosal manifestations
Secondary—Skin, mucosal or other generalized manifestations present; chancres present or absent; serology positive
Early Latent—Asymptomatic infection of less than 4 years duration
Late Latent—Asymptomatic infection of 4 or more years duration
Late—Specify type: cardiovascular; skin; bone; visceral; asymptomatic or symptomatic central nervous system
Congenital—Infected before birth, with clinical evidence or a minimum of three successive quantitative serologic tests for syphilis

Tuberculosis: Indicate pulmonary or if other form, specify.

Report* cases classified in one or more of these groups (these are active or presumptively active):

1. Tubercle bacilli demonstrated by any test
2. No tubercle bacilli have been found, but
 - a. Shadows characteristic of active tuberculosis on chest film, i.e., cavities, soft infiltrate, etc.
 - b. Unexplained pleurisy with effusion
 - c. Clinically active extra pulmonary tuberculosis: meningitis, military or other organ

*Do not report cases when the ONLY evidence consists of: Chest X-ray showing minimal fibrous lesions, fine linear strands, discrete hard nodules and apical scars, without history or symptoms; a positive tuberculin reaction; pulmonary calcifications, including healed primary tuberculosis; healed extra pulmonary tuberculosis.

Remarks: Space on back of card for information on place where disease contracted or other additional information.

BOOK REVIEWS

THORACIC SURGERY. By Richard H. Sweet, M.D., Associate Clinical Professor of Surgery, Harvard University Medical School. Illustrations by Jorge Rodríguez Arroyo, M.D., Assistant in Surgical Therapeutics, University of Mexico Medical School. W. B. Saunders Company, Philadelphia, 1950. \$10.00.

This is a difficult book for a reviewer to report upon. The title "Thoracic Surgery" is misleading; in fact, it should be more accurately entitled "Techniques of Thoracic Surgery as Practiced by Richard Sweet, M.D."

It starts out with the concept that any qualified surgeon may become proficient in thoracic surgery by mastering the techniques described by Dr. Sweet. It makes the thoracic surgeon purely a technician. Diagnosis, pathological findings and indications for operation are entirely ignored. With the above limitations in mind one can then proceed to evaluate the work as a whole and here one can find much of value. The operations described are those found useful by the author. Discussion of the anatomy of the thoracic cage and the illustrations presented are excellent. The Jackson-Huber nomenclature was adopted for the pulmonary segments, but here, as elsewhere in the book, no credit is given to the originator of the nomenclature. Preoperative medication, preparation and anesthesia problems are well discussed. The operation of thoracoplasty is well covered. Of interest is that in the treatment of the "stove-in" chest no mention is made of the value of a local anesthetic block. Of unique value and arrangement is the outline of procedure for pneumonectomy and lobectomy on the right and left sides with back references to anatomical illustrations. It is refreshing to see that Dr. Sweet debunks "vago-vagal" reflexes and attributes these phenomena to anoxia.

The problem of cardiac arrest and its prophylaxis is very well presented. The various operative procedure under "Mediastinum" and "Esophagus" are well discussed.

Of interest in discussing esophagoplasties is the fact that no mention is made of esophageal dilatation. The excellent operation known as the Heller procedure is only referred to and in this book Dr. Sweet advocates fixation of the stomach above the diaphragm following esophagoplasty.

Viewed critically, this volume is an excellent addition to a surgeon's library where there is need for a ready reference book giving good anatomical details and outlining a few proven procedures. However, it should not be considered as being a textbook of thoracic surgery.

BRAIN METABOLISM AND CEREBRAL DISORDERS. By Harold E. Himwich, M.D., Chief, Clinical Research Branch, Medical Division, Army Chemical Center, Maryland. The Williams and Wilkins Company, Baltimore, 1951. 451 pages. \$6.00.

This is a truly monumental piece of work in which the author attempts to correlate what is known of metabolic processes in nervous tissue with normal and abnormal functioning of the human nervous system. Incomplete as this knowledge is at present, familiarity with it is of great value to every physician, and most particularly to the psychiatrist.

The various alternative metabolic pathways are considered in detail, and in a highly technical manner. However, such is the organization of the book that there is always a summary provided in relatively non-technical language for the reader not especially qualified in the particular field under discussion.

The author ventures rather beyond the borders of certain knowledge into the field of speculation, but there is nothing

dogmatic about his presentation of controversial subjects, and one is stimulated by his boldness. As well as being of interest to anyone with a curiosity in regard to what we know of how the nervous system functions, the book is of tremendous value to those engaged in research in this field, since it is well documented.

CLINICAL LABORATORY METHODS—Fourth Edition. By W. E. Bray, B.A., M.D., Professor of Clinical Pathology, University of Virginia, Director of Clinical Laboratories, University of Virginia Hospital. 119 test illustrations, and 18 color plates, 614 pages. The C. V. Mosby Company, St. Louis, 1951. \$7.25.

In no textbook has the reviewer ever seen more concentrated, better organized material presented in 562 pages of text than in this particular fourth edition. Most of the worthwhile and important material has been carried over from previous editions but this edition has brought the book up to date so that most of the present accepted tests of recent origin are included. Improved techniques in other examinations are also included in this edition. The Rh problem has been brought up to date and considerable improvement has been made in the study of bone marrows, the anemias, the mycoses, and bacteriology, especially in reference to the antibiotics. The book includes an excellent table of known normal values expressed in both milligrams per cent and milliequivalents. Papanicolaou's method of staining is included in the text and many very recent modifications of older tests have also been included. This book is a "must" for all pathologists, clinical pathologists, and all physicians having any interest whatsoever in laboratory procedures. It is highly recommended. Its only fault is in its illustrations. It is hoped that in future editions the author will secure the services of a qualified medical illustrator, as many of the illustrations definitely detract from an otherwise excellent book.

DIABETES INSIPIDUS. By Harry Blotner, M.D., Associate Visiting Physician, Beth Israel Hospital, Boston, Mass. Edited by Henry A. Christian, A.M., M.D., LL.D., Sc.D. (Hon.), M.A.C.P., Hon. F.R.C.P. (Can.), D.S.M. (A.M.A.). Oxford University Press, New York. 1951. 160 pages.

This monograph presents in ideal fashion for the doctor the subject of diabetes insipidus. The introductory historical section is of great interest. This is followed by the full discussion on the physiology of thirst and water metabolism and the pathological anatomy of patients with diabetes insipidus, a comprehensive clinical description, laboratory studies and treatment. The book is well illustrated with many charts and tablets, reproductions of x-rays, etc., and there is a bibliography of 470 titles. Certainly Dr. Blotner left no stone unturned in producing a comprehensive and up-to-date discussion of this interesting subject.

DIABETES MELLITUS—Principles and Treatment. By Garfield G. Duncan, M.D., Clinical Professor of Medicine, Jefferson Medical College. Illustrated. W. B. Saunders Company, Philadelphia, 1951. 289 pages. \$5.75.

This is a monograph on diabetes. Although a number of other books have been written on the subject, this one deserves particular mention because it is written clearly and succinctly. The reviewer finds himself in general agreement with the author's ideas; even where he may not agree, he finds the ideas well presented.

The food exchanges system, recently adopted by the American Dietetic and American Diabetes Associations, is discussed at some length. Dr. Duncan has found it useful and recommends it in detail. Any physician or patient not acquainted with it may find certain difficulties in getting used to it. (The diabetic who has been taught that bread is a food to be used with caution will have to accustom himself to the thought of eating nine bread exchanges on a 1,700-calory diet.) In the text the number of calories in each of the food exchanges is sensibly rounded off to the nearest 5 or 0. This is not true of Table 15 on page 112, which summarizes the composition of food.

The author is to be commended for emphasizing the fact that foods which are best for other members of the family are best for diabetics too, and that there is rarely need for these patients to have special diabetic foods.

The book is endorsed as an excellent guide for the internist or general practitioner who treats diabetics, as well as for the medical student who is learning about this subject.

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ELECTROENCEPHALOGRAPHY IN CLINICAL PRACTICE. By Robert S. Schwab, M.D., Director of the Brain Wave Laboratory, Massachusetts General Hospital. Illustrated. W. B. Saunders Company, Philadelphia, 1951. 195 pages. \$6.50.

This book presents in very concise form what the practitioner should know about the procedure of electroencephalography. The usefulness of the procedure is conservatively evaluated, and if all physicians who request electroencephalograms on their patients were familiar with the material presented the lot of the electroencephalographer would be greatly alleviated. The various abnormalities and their significance are enumerated, without, however, the many illustrations to be found in the more ambitious atlases on the subject.

Although the author specifies that this is not to be considered a text on the subject, in the reviewer's opinion it can well serve as such. It is simply and clearly written, and presents both the theoretical and practical aspects. It can be highly recommended both to the physician who uses electroencephalography and to the electroencephalographer who is setting up a laboratory.

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YOUR SINUS TROUBLES AND TREATMENTS—An Authoritative Explanation for the Layman, with Recommendations for the Treatment of Your Sinus Conditions, Colds, Hay Fever and Other Allergies. By Friedrich S. Brodnitz, M.D. Abelard Press, 381 Fourth Avenue, New York, 1950. 243 pages. \$2.50.

The book presented as an authoritative explanation for the layman, is a volume of 243 pages of acceptable paper and satisfactory type. The introduction is interesting and sheds considerable light on the personality and mental attitude of the author. It contains a significant statement to the effect that he has a board with medical illustrations on the wall of the treatment room that has served him well in enlightening patients about the localization and the mechanics of their afflictions. The book was born of a desire to put daily piecemeal lectures into writing. The statement that "There is nothing worth knowing in science than cannot be explained in everyday language" is immediately followed by one to the effect that a certain number of medical terms proved unavoidable. This was made acceptable on the basis that the reader will find the origin and meaning of each unavoidable medical term explained the first time it is used. In general the author has followed this plan.

Any attempt to present for the layman a clear-cut, useful mental picture of the anatomy, physiology and function of

the normal nose and sinuses to say nothing of associated pathology, diagnosis and treatment of and for these structures in this allotted page space is doomed to failure. Add to these the subject of allergy and the use of antihistamine drugs and it becomes evident that the dilution factor of incorporated subjects precludes any opportunity for detailed discussion.

There is no question as to the author's knowledge of the subjects and material. In the few instances when he deviates from the role of speaking lay language as he thinks the layman would use it he is delightful. Most of the rest of the time one has the unpleasant feeling that one is being talked down to. This is truly unfortunate, in that the reviewer believes this is the last thing the author would wish to infer. There are evident attempts to retain the reader's attention by employing known literary artifices. Unfortunately, the subtlety of the artist was not employed to wholly disguise the attempts to regenerate interest. One cannot recommend this book to the general lay reader as the answer for his questions about sinus trouble and treatments.

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MEDICINE OF THE YEAR—1951. By John B. Youmans, M.D., Editor, Dean, School of Medicine, Vanderbilt University.

"Medicine of the Year" is presented with a view to providing current information useful to the doctor in the practice of medicine. The publication is generally good. It contains abstracts of the literature by specialists for the benefit of the general practitioner. The subject matter is rather highly selective, according to the viewpoints of the editors of the respective sections. Because of its limited size, this series is much less complete than such a comparable review as the Year Books of Medicine and Surgery. Each section of abstracts has its own summary, the reading of which will allow the physician to predict what he will find in the subject matter proper.

There are certain defects which should be pointed out. The abstracts too frequently give too much of the opinions of the authors or the editors, and not enough of the meat of the article summarized. There is a lack of balance in the amount of space allowed to the different sections and in the manner of presentation. For example, the section on internal medicine abstracts 81 articles in 18 pages and does it in a clear concise manner, although the reader often will have to look up the original article in order to make use of the information. On the other hand, the section on obstetrics and gynecology abstracts 70 articles in 50 pages and presents its subject matter in considerable detail.

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MANAGEMENT OF CELIAC DISEASE. By Sidney Valentine Haas, M.D., Professor of Pediatrics and Director of the Department, New York Polyclinic Medical School and Hospital; and Merrill Patterson Haas, M.D., J. B. Lippincott Company, Philadelphia, 1951. 188 pages. \$5.00.

This monograph embodies the results of an enormous personal experience and of a very comprehensive survey of the literature. The senior author, Dr. Sidney V. Haas of New York, professor of pediatrics at the New York Polyclinic Hospital, now in his 81st year, has been a life-long student of the disease and is particularly well known for having established the value of banana in its treatment. Probably no other living man has had so large a personal experience with celiac disease; he records 603 cases, of which 370 were treated long enough to permit conclusions.

There is an interesting and exhaustive historical review. Celiac disease was described and given its name by Aretaeus the Cappadocian who wrote in the first century of the Christian era; he also recommended treatment with the

"juice of the plantain," a member of the banana family. The classic description by Samuel Gee, published in 1888, is fully cited; as, among others, are those of Christian Herter on intestinal infantilism (1908) and of Howland (1921). Haas introduced banana in 1923—a method of treatment still generally employed. The symptoms are considered in great detail, the authors' scheme of treatment is presented and the course and prognosis discussed. At the end their etiologic hypothesis is offered. This hypothesis refers the primary manifestations of the disease to irritants produced in the intestine from polysaccharides in the diet, resulting in increased motility and impaired absorption. The authors believe that the diagnosis can be firmly based on three points: (1) a prolonged, intermittent diarrhea; (2) exclusion of other diseases by means of clinical pathologic tests; and (3) correction of the diarrhea by "carbohydrate-specific diet" and of recurrence of diarrhea by inclusion of carbohydrates other than those found in fruits and vegetables.

It is fair to say that today pediatric opinion has generally accepted the separation of celiac disease and pancreatic fibrocystic disease as distinct entities, the latter distinguished by characteristic pathologic changes, deficiency of pancreatic secretion, and the regular occurrence of pulmonary changes. The authors, however, do not fully accept the distinction. They not only question the diagnostic validity of the test for trypsin in the duodenal contents and of the pulmonary changes as an essential part of the disease but go so far as to say, "... we have come to one very positive conclusion. That is, if cystic fibrosis of the pancreas is treated by the same dietary regimen that is used in celiac disease, the diarrhea will cease, nutrition will become normal, and if the pulmonary infiltration has not become too severe," (our italics) "it too will clear up." The proof which they offer of this thesis is far from convincing, consisting of two cases, one of which never showed pulmonary symptoms and the other still having "a chronic cough" after six years. It is interesting to note that in their review of the literature on pathology, nearly all of the abnormalities noted are those of pancreatic cystic fibrosis. One wonders how many of the authors' cases actually belonged to that category and to what extent their discussions and clinical descriptions are vitiated by inclusion of both groups of cases.

The volume must therefore be recommended with reservations. Its bibliography (668 items) and review of the literature are exhaustive and of great reference value. The plan of treatment for celiac disease itself is simple and clearly effective, but its complete applicability to fibrocystic disease may certainly be questioned. Only four lines are devoted to antibiotics, without detail. The material is clearly presented and highly readable, but on the whole the value of the book is restricted by its devotion to a questionable unitarianism and by its minimization of widely accepted contrary views. There is a brief index.

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SURGICAL FORUM—Proceedings of the Forum Sessions, 36th Clinical Congress of the American College of Surgeons, Boston, Mass., October 1950. By the Surgical Forum Committee. W. B. Saunders Company, Philadelphia, 1951, 665 pages, \$10.00.

This volume is a compilation of the papers presented before the Forum on Fundamental Surgical Problems at the 1950 Clinical Congress of the American College of Surgeons. It contains 165 articles and abstracts by 393 authors and represents an important cross-section of the surgical research accomplished in 1950. (Unfortunately, some of the forum's most important papers are represented only in abstract.) In general, the authors have prepared papers with rigorous controls and methods, careful selection of data and

concise presentation of results. Surgical physiology receives the greatest attention, with the majority of papers on experimental techniques and principles which will require considerable translation before they are of practical use to the surgeon. This book will be of greatest value to those interested in the investigative aspects of surgery.

The volume is divided into 12 sections representing important specialties and viewpoints in surgery. Lacking appropriate representation are the fields of urologic, orthopedic, and gynecologic surgery. Attempts to improve the results of radical extirpative surgery are reflected by papers on resection of the trachea with replacement of defects by homotransplantation; radical total gastrectomy with replacement of the stomach by a transplanted pouch of right colon; and planned re-explorations of patients whose primary tumors were found at the original resection to have extended to the regional lymph nodes. Cardiac and thoracic surgery have received much attention; cardiac arrest, ventricular fibrillation, cardiac massage, and various techniques for accomplishing extracardiac vascular shunts are prominently discussed.

The attempts to extend neurosurgical ablation in the treatment of non-neoplastic craniocerebral disease are well represented. Several authors explore the use of radioactive iodine and potassium in the localization of intracranial neoplasms. The importance of tracheotomy in the care of craniocerebral trauma is stressed. Recurrence of vasoconstrictor activity after sympathectomy was found to be less when ganglionectomy was performed than when a pre-ganglionic or postganglionic sympathectomy was done. Robertson and Smithwick's late results following lumbar and various forms of dorsal sympathectomy are presented only in abstract.

Authors studied different phases of the homotransplantation problem, using blood vessels, skin, bone, endocrine tissues, and trachea, and different techniques of storage and preservation. The use of intra-arterial transfusions in shock is discounted where adequate prompt venous replacement can be accomplished. The role of the adrenal cortex and of the hepatic and portal "pool" in shock is also discussed. The frequency of carbon dioxide retention under anesthesia is shown by continuous analysis of the expired gases. Curare is implicated in the abolition of appropriate respiratory adjustments to asphyxia, in addition to its peripheral effects. A hypertensive reflex response is elicited by the simple manipulation of the epiglottis during intubation under light anesthesia. Also stressed are the deleterious possibilities of the excessive manipulation of the sympathetic chain during sympathectomy, and the dangers attendant upon the use of ether in sympathectomies for peripheral vascular disease.

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A STUDY OF EPILEPSY IN ITS CLINICAL, SOCIAL AND GENETIC ASPECTS. By Carl Henry Alström. Acta Psychiatrica et Neurologica, Supplementum 63. Ejnar Munksgaard, Norregade 6, Copenhagen, 1950.

This monograph is of greater interest to the neurologist than to physicians in general. It gives rather a clear insight into the incidence of the convulsive state in Sweden and the facilities there available for diagnosis and therapy. The first portion of the volume deals in extenso with classification, and quotes various authorities who are in disagreement. The genetic aspect of epilepsy is dealt with at length.

Apparently there has been a law in Sweden since the eighteenth century forbidding marriage of idiopathic epileptics; since in the face of such legislation the incidence of seizures in this country seems quite comparable with that in the world at large, it would seem rather evident that heredity is not an extremely important factor in the etiology of the convulsive states.